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FM 1-55

WAR DEPARTMENT

ARMY AIR FORCE FIELD  
MANUAL

REFERENCE DATA,  
ADMINISTRATION

April 22, 1942

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REFERENCE DATA, ADMINISTRATION

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**FM 1-55**

**ARMY AIR FORCE FIELD MANUAL**

**REFERENCE DATA, ADMINISTRATION**

**SECTION I**

**GENERAL**

- 1. **SCOPE.**—This manual contains reference data for use by Army Air Force personnel in the theater of operations and includes a list of references and certain tables pertaining to the organizational, technical, and logistical aspects of Army Air Force planning.
- 2. **PURPOSE.**—This manual is designed primarily for use by G-4 and S-4 sections of Army Air Force staffs and other staff officers whose duties involve Army Air Force administrative matters.
- 3. **LIST OF REFERENCES.**—
  - a. For information pertaining to a G-4 Estimate of the Situation, Administrative Orders, and other G-4 tables and reports, see FM 101-5.
  - b. For information relative to movements by motor, rail, or water, see FM 101-10.
  - c. For authorized conventional signs, military symbols, and abbreviations, see FM 21-30.
  - d. For characteristics and performance of U. S. Army airplanes, see Matériel Division monthly publications on this subject.
  - e. For nomenclature, markings, weights, and cubage of guns, ammunition, bombs, pyrotechnics, and signalling devices, see the appropriate Ordnance Department Standard Nomenclature List (SNL).
  - f. For nomenclature and characteristics of chemical munitions, see CWS Standard Nomenclature and Price Lists and FM 101-10.
  - g. For nomenclature, characteristics, weights, and cubage of signal equipment, see Signal Corps General Catalogue.
  - h. For data pertaining to quartermaster equipment, see FM 21-15.
  - i. For data relative to moon phases and hours of daylight and darkness, see FM 101-10.

## SECTION II

## GLOSSARY

*Administration.*—When unqualified, administration includes all phases of military operations not involved in the terms *tactics* and *strategy*. It comprises: supply, evacuation, sanitation, construction, maintenance, replacements, transportation, traffic control, salvage, graves registration, burials, computations pertaining to movements, personnel management, quartering, military government, martial law, censorship, and other allied subjects.

*Administrative map.*—A map on which is recorded graphically information pertaining to administrative matters, such as supply and evacuation installations, boundaries of theater of operations and its subdivisions, boundaries of the air force service area and its subdivisions, personnel replacement and evacuation installations, main supply roads, and the line forward of which no lights will be shown; necessary tactical details are also shown.

*Note.—Air force service area.*—The area occupied by all elements of the air force assigned to a theater of operations and within which the air force commander is responsible for organization and operation of administrative arrangements to serve components of this command. (See par. 145, FM 100-10.)

*Administrative order.*—An order covering administrative details relative to supply, evacuation, traffic, service troops, and other administrative details of operation. They are issued when the instructions are too voluminous to be included in paragraph 4 of the field order and at other times when necessary to publish administrative instructions to the command. They are usually issued by the headquarters of air forces and air commands higher than groups and by air base commanders.

*Aerial photograph.*—A photograph taken from any kind of aircraft in the air.

*Aeronautical charts.*—Maps upon which information pertaining to air navigation has been added; intended primarily for use in air navigation. They are classified as *sectional* (scale 1:500,000) and *regional* (scale 1:1,000,000).

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*Air base.*—A command which comprises the installations and facilities required by and provided for the operation, maintenance, repair, and supply of a specific air force.

*Air-borne troops.*—A general term used to include parachute troops and air-landing troops.

*Air force.*—A major combat unit normally comprising a headquarters, a bomber command, an interceptor command, an air support command, air bases, and such other tactical air units and ground arms and services as may be attached or assigned. Its headquarters is divided into a combat echelon and a fixed echelon and it is self-contained in approximately the same degree as a mobile field army.

*Air force combat command.*—A command which includes all combat, reconnaissance, units of the air support command, and transport aviation of the Army Air Forces, not assigned or attached to task forces, oversea garrisons or other commanders, and such tactical and auxiliary units and troops as may be assigned or attached thereto.

*Aircraft warning service.*—A combination of visual, audio, and instrumental means of collecting information of hostile and friendly aircraft; means for evaluating that information and displaying the resulting intelligence in a form adapted to the requirements of interceptor pursuit aviation, anti-aircraft artillery, barrage balloons, and for warnings to civil, industrial, military, and naval establishments; and the essential communications and military and civilian personnel to operate the Service.

*Bombardment aviation.*—That type of military aviation whose primary mission is the attack of surface objectives with bombs; classified as light, medium, and heavy.

*Depot.*—An organized locality for the reception, classification, storage, issue, or salvage of supplies; or for the reception, classification, and forwarding of replacements. *Branch depots* pertain to a single arm or service and *general depots* pertain to two or more supply arms or services.

*Echelon.*—A formation in which the sub-divisions are placed one behind another extending beyond and unmasking one another wholly or in part. In battle formations, the different fractions of command in the direction of depth, to each of which a principal combat mission is assigned; such as the attacking echelon, support echelon, and reserve echelon.

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The various sub-divisions of a headquarters; such as forward echelon and rear echelon. The sub-division of Army Air Force units such as the air echelon and the ground echelon.

*Fragmentary orders.*—Combat orders issued in fragmentary form, and consisting of separate instructions to one or more subordinate units prescribing the part each is to play in the operation or in the separate phases thereof.

*Group.*—An Army Air Force unit composed of two or more squadrons of a single class of aviation.

*Intermediate scale maps.*—Maps normally of a scale from 1:200,000 to 1:500,000 intended for planning strategic operations, including the movement, concentration, and supply of troops.

*Landing field.*—A field or system of runways suitable for the landing and taking-off of airplanes.

*Large scale maps.*—Maps normally of a scale not greater than 1:20,000 intended for the technical and tactical needs of the combat arms.

*Liaison.*—The connection established between units or elements by a representative—usually an officer—of one unit who visits or remains with another unit.

*Logistics.*—That branch of military art that comprises everything relating to movement, supply, and evacuation.

*Medium scale maps.*—Maps normally of a scale from 1:50,000 to 1:125,000 intended for strategical, tactical, and administrative studies by units ranging in size from corps to the regiment.

*Mission.*—A specific task or duty assigned to an individual or unit, or deduced from a knowledge of the plans of the immediate superior. For the Army Air Forces: Each separate flight operation of a single airplane or of a formation.

*Mosaic.*—An assembly of two or more overlapping vertical photographs.

*Oblique aerial photograph.*—A photograph made from an airplane in the air with a camera whose optical axis is tilted away from the vertical.

*Observation aviation.*—That type of military aviation whose primary functions are observation of artillery fire; and command, courier, and liaison duty for ground units.

*Parachute troops.*—Troops moved by air transport and landed by means of parachutes.

REFERENCE DATA, ADMINISTRATION

*Photomap.*—An aerial photograph upon which information commonly found on maps has been placed, including, at least, a scale and a directional arrow.

*Pursuit aviation.*—That type of military aviation whose primary function is air fighting; classified as interceptor and fighter.

*Reconnaissance aviation.*—That type of military aviation whose primary functions are reconnaissance and photography for ground and air force units.

*Requisition.*—A request for supplies, usually on a form furnished for the purpose; also used to signify the purchase by demand of supplies in hostile occupied territory.

*Squadron (Army Air Forces).*—The basic administrative and tactical unit of the Army Air Forces, consisting of two or more flights.

*Task force.*—A temporary tactical grouping of units of one or more arms and services, under one command, formed for the execution of a specific operation or mission. (See FM 100-5, pars. 23 and 125).

*Transport aviation.*—That type of military aviation organized, equipped, and trained to carry personnel and cargo.

*Troop movement by air.*—A movement in which troops are moved by means of air transport.

*Unit loading.*—Method of loading which gives primary consideration to the availability of the troops for combat purposes on landing, rather than utilization of ship space.

1. *Combat unit loading.*—Method of loading in which certain units are completely loaded on one ship (airplane) with at least their essential combat equipment and supplies immediately available for debarkation with the troops, together with the animals and motors for the organization when this is practicable.

2. *Convoy unit loading.*—Method of loading in which the troops with their equipment and supplies are loaded on transports (airplanes) of the same convoy (formation), but not necessarily on the same transport (airplane).

3. *Organizational unit loading.*—Method of loading in which organizations, with their equipment and supplies, are loaded on the same transport, but not so loaded as to allow debarkation of troops and their equipment simultaneously.

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*Vertical aerial photograph.*—An aerial photograph made with a camera whose optical axis is at or near the vertical.

*Wing.*—An Army Air Force unit composed of two or more groups of the same or different type airplanes.

**SECTION III**

**STRENGTH OF ARMY AIR FORCE ORGANIZATIONS**

Organization	Strength		
	Airplanes	Off- icers	En- listed men
Headquarters and headquarters squadron, air force.	[6 (1-engine)..... 7 (2-engine).....]	84*	521
Headquarters and headquarters squadron, wing..	[1 (1-engine)..... 2 (2-engine).....]	14	130
Headquarters and headquarters squadron, bomber command.	[1 (1-engine)..... 2 (2-engine).....]	30	157
Headquarters and headquarters squadron, air support command.	[3 (1-engine)..... 2 (2-engine).....]	36	189
Headquarters and headquarters squadron, interceptor command.	[1 (2-engine)..... 2 (1-engine).....]	32	169
Headquarters and headquarters squadron, pursuit group (I) or (F).	5 (1-engine).....	47	250
Pursuit squadron (I).....	25 (1-engine).....	42	218
Pursuit squadron (F).....	25 (2-engine).....	34	287
Headquarters and headquarters squadron, bomber group (H).	3 (4-engine).....	24	267
Bomber squadron (H).....	8 (4-engine).....	38	237
Headquarters and headquarters squadron, bomber group (M).	5 (2-engine).....	26	273
Bomber squadron (M).....	13 (2-engine).....	52	254
Headquarters and headquarters squadron, bomber group (L).	5 (2-engine).....	21	261
Bomber squadron (L).....	13 (2-engine).....	26	219
Reconnaissance squadron (H).....	8 (4-engine).....	44	271
Reconnaissance squadron (M).....	13 (2-engine).....	61	276
Reconnaissance squadron (L).....	13 (2-engine).....	38	241
Observation squadron.....	[3 (1-engine)..... 10 (2-engine).....]	36	219
Observation squadron (A.F).....	[4 (1-engine)..... 13 (2-engine).....]	46	268

**REFERENCE DATA, ADMINISTRATION**

Organization	Strength		
	Airplanes	Officers	Enlisted men
Headquarters and headquarters squadron, transport wing.	3 (1-engine) .....	9	84
Headquarters and headquarters squadron, transport group.	3 (1-engine) .....	11	106
Transport squadron (2-engine) .....	13 (2-engine) .....	41	184
Headquarters and headquarters squadron, air base group.	None .....	23	225
Matiériel squadron .....	3 (1-engine) .....	12	315
Air base squadron .....	3 (1-engine) .....	8	118

\*Includes 5 warrant officers. This table shows aggregate strength in accordance with tables of organization, July 1, 1941.

**SECTION IV**

**STRUCTURAL REQUIREMENTS FOR ARMY AIR FORCE UNITS IN THE FIELD**

**ALL HEADQUARTERS AND HEADQUARTERS SQUADRONS AIR FORCES**

Number	Purpose	Size	Location
2	Headquarters and communications building.	20' x 100' .....	Safe distance.
1	Operations .....	20' x 28' .....	Near field.
1	Technical distributing point supply .....	20' x 20' .....	Near field.
3	Latrines .....	8' x 16' .....	Near field.
2	Bathhouse and lavatory—enlisted .....	20' x 28' .....	Near barracks.
1	Bathhouse and lavatory—officers' .....	20' x 28' .....	Near barracks.
2	Mess halls—enlisted .....	20' x 100' .....	Near barracks.
1	Ordnance supply building .....	20' x 20' .....	Near field.
2	Supply buildings, Chemical Warfare Service.	20' x 36' .....	Near field.

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**ALL COMMAND, WING AND GROUP HEADQUARTERS AND  
HEADQUARTERS SQUADRONS**

Number	Purpose	Size	Location
1	Headquarters and communications building.	20' x 84'	Safe distance.
1	Operations building	20' x 28'	Near field.
1	Technical distributing point supply building.	20' x 20'	Near field.
2	Latrines	8' x 16'	Near field.
1	Bathhouse and lavatory—enlisted	20' x 28'	Near barracks.
1	Bathhouse and lavatory—officers'	20' x 28'	Near officers' quarters.
1	Mess hall—enlisted	20' x 100'	Near barracks.
1	Ordnance supply building	20' x 20'	Near field.
1	Supply buildings, Chemical Warfare Service.	20' x 36'	Near field.

**'ALL HEADQUARTERS AND HEADQUARTERS SQUADRONS  
AIR BASE GROUPS**

1	Headquarters and communications building.	20' x 52'	Safe distance.
2	Latrines	8' x 16'	Near field.
1	Bathhouse and lavatory—enlisted	20' x 28'	Near barracks.
1	Bathhouse and lavatory—officers'	20' x 28'	Near officers' quarters.
1	Mess hall—enlisted	20' x 100'	Near barracks.

**ALL COMBAT SQUADRONS**

1	Headquarters and communications building.	20' x 28'	Near field.
1	Technical distributing point supply building.	20' x 20'	Near field.
1	Ordnance supply building	20' x 20'	Near field.
1	Ordnance supply building (ammunition and pyrotechnics).	20' x 20'	Safe distance.
2	Latrines	8' x 16'	Near field.
1	Bathhouse and lavatory—enlisted	20' x 28'	Near barracks.
1	Bathhouse and lavatory—officers'	20' x 28'	Near officers' quarters.
1	Mess hall—enlisted	20' x 100'	Near barracks.
1	Warehouse and shop—Chemical Warfare Service.	20' x 36'	Near field.

**REFERENCE DATA, ADMINISTRATION**

**ADDITIONAL FOR HEADQUARTERS AND HEADQUARTERS  
SQUADRON, AIR FORCES**

Number	Purpose	Size	Location
1	Repair hangar.....	Undetermined .....	Adjacent to field.
11	Barracks—400 cubic feet per man .....	20' x 100' .....	Safe distance.
4	Quarters—officers', 800 cubic feet per officer.	20' x 100' .....	Safe distance.
1	Mess hall—officers'.....	20' x 100' .....	Near officers' quarters.
3	Latrine—enlisted.....	8' x 16' .....	Near barracks.
2	Latrine—officers'.....	8' x 16' .....	Near officers' quarters.

**ADDITIONAL FOR HEADQUARTERS AND HEADQUARTERS  
SQUADRON, WING**

1	Repair hangar.....	Undetermined .....	Adjacent to field.
3	Barracks—400 cubic feet per man.....	20' x 100' .....	Safe distance.
1	Quarters and mess—officers'.....	20' x 100' .....	Safe distance.
1	Latrine—enlisted.....	8' x 16' .....	Near barracks.
1	Latrine—officers'.....	8' x 16' .....	Near officers' quarters.

**ADDITIONAL FOR HEADQUARTERS AND HEADQUARTERS  
SQUADRON, BOMBER COMMAND**

1	Repair hangar.....	Undetermined .....	Adjacent to field.
3	Barracks—400 cubic feet per man.....	20' x 100' .....	Safe distance.
2	Quarters—officers', 800 cubic feet per officer.	20' x 100' .....	Safe distance.
1	Mess—officers'.....	20' x 52' .....	Near officers' quarters.
1	Latrine—enlisted.....	8' x 16' .....	Near barracks.
1	Latrine—officers'.....	8' x 16' .....	Near officers' quarters.

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**ADDITIONAL FOR HEADQUARTERS AND HEADQUARTERS  
SQUADRON, AIR SUPPORT COMMAND**

Number	Purpose	Size	Location
1	Repair hangar.....	Undetermined.....	Adjacent to field.
4	Barracks—400 cubic feet per man.....	20' x 100'.....	Safe distance.
2	Quarters—officers', 800 cubic feet per officer.	20' x 100'.....	Safe distance.
1	Mess—officers'.....	20' x 60'.....	Near officers' quarters.
1	Latrine—enlisted.....	8' x 16'.....	Near barracks.
1	Latrine—officers'.....	8' x 16'.....	Near officers' quarters.

**ADDITIONAL FOR HEADQUARTERS AND HEADQUARTERS  
SQUADRON, INTERCEPTOR COMMAND**

1	Repair hangar.....	Undetermined.....	Adjacent to field.
4	Barracks—400 cubic feet per man.....	20' x 100'.....	Safe distance.
2	Quarters—officers' 800 cubic feet per officer.	20' x 100'.....	Safe distance.
1	Mess hall—officers'.....	20' x 60'.....	Near officers' quarters.
1	Latrine—enlisted.....	8' x 16'.....	Near barracks.
1	Latrine—officers'.....	8' x 16'.....	Near officers' quarters.

**ADDITIONAL FOR HEADQUARTERS AND HEADQUARTERS  
SQUADRON, TRANSPORT, WING**

1	Repair hangar.....	Undetermined.....	Adjacent to field.
2	Barracks—400 cubic feet per man.....	20' x 100'.....	Safe distance.
1	Quarters and mess—officers' .....	20' x 100'.....	Safe distance.
1	Latrine—enlisted .....	8' x 16'.....	Near barracks.
1	Latrine—officers' .....	8' x 16'.....	Near officers' quarters.

**REFERENCE DATA, ADMINISTRATION**

**ADDITIONAL FOR HEADQUARTERS AND HEADQUARTERS SQUADRON, PURSUIT GROUP (I) OR (F)**

Number	Purpose	Size	Location
1	Repair hangar.....	Undetermined.....	Adjacent to field.
5	Barracks—400 cubic feet per man.....	20' x 100'.....	Safe distance.
2	Quarters—officers', 800 cubic feet per officer.	20' x 100'.....	Safe distance.
1	Mess hall—officers'	20' x 76'.....	Near officers' quarters.
2	Latrines—enlisted.....	8' x 16'.....	Near barracks.
1	Latrine—officers'	8' x 16'.....	Near officers' quarters.

**ADDITIONAL FOR PURSUIT SQUADRON (I)**

2	Repair hangar.....	Undetermined.....	Adjacent to field.
5	Barracks—400 cubic feet per man.....	20' x 100'.....	Safe distance.
2	Quarters—officers', 800 cubic feet per officer.	20' x 100'.....	Safe distance.
1	Mess hall—officers'	20' x 76'.....	Near officers' quarters.
1	Latrine—enlisted.....	8' x 16'.....	Near barracks.
1	Latrine—officers'	8' x 16'.....	Near officers' quarters.

**ADDITIONAL FOR PURSUIT SQUADRON (F)**

2	Repair hangar.....	Undetermined.....	Adjacent to field.
6	Barracks—400 cubic feet per man.....	20' x 100'.....	Safe distance.
2	Quarters—officers', 800 cubic feet per officer.	20' x 100'.....	Safe distance.
1	Mess hall—officers'	20' x 60'.....	Near officers' quarters.
2	Latrines—enlisted.....	8' x 16'.....	Near barracks.
1	Latrine—officers'	8' x 16'.....	Near officers' quarters.

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ADDITIONAL FOR HEADQUARTERS AND HEADQUARTERS  
SQUADRON BOMBER GROUP

Number	Purpose	Size	Location
1	Repair hangar.....	Undetermined..	Adjacent to field.
6	Barracks—400 cubic feet per man.....	20' x 100'.....	Safe distance.
1	Quarters—officers', 800 cubic feet per officer.....	20' x 100'.....	Safe distance.
1	Mess hall—officers'.....	20' x 52'.....	Near officers' quarters.
2	Latrines—enlisted.....	8' x 16'.....	Near barracks.
1	Latrine—officers'.....	8' x 16'.....	Near officers' quarters.

## ADDITIONAL FOR BOMBER SQUADRON (H)

1	Repair hangar.....	Undetermined..	Adjacent to field.
5	Barracks—400 cubic feet per man.....	20' x 100'.....	Safe distance.
2	Quarters—officers', 800 cubic feet per officer.....	20' x 100'.....	Safe distance.
1	Mess hall—officers'.....	20' x 60'.....	Near officers' quarters.
1	Latrine—enlisted.....	8' x 16'.....	Near barracks.
1	Latrine—officers'.....	8' x 16'.....	Near officers' quarters.
1	Warehouse and shop—Chemical Warfare Service.....	20' x 36'.....	Adjacent to field.

## ADDITIONAL FOR HEADQUARTERS AND HEADQUARTERS SQUADRON BOMBER GROUP (M)

1	Repair hangar.....	Undetermined..	Adjacent to field.
6	Barracks—400 cubic feet per man.....	20' x 100'.....	Safe distance.
1	Quarters—officers', 800 cubic feet per officer.....	20' x 100'.....	Safe distance.
1	Mess hall—officers'.....	20' x 52'.....	Near officers' quarters.
2	Latrines—enlisted.....	8' x 16'.....	Near barracks.
1	Latrine—officers'.....	8' x 16'.....	Near officers' quarters.

**REFERENCE DATA, ADMINISTRATION**

**ADDITIONAL FOR BOMBER SQUADRON (M)**

Number	Purpose	Size	Location
1	Repair hangar .....	Undetermined .....	Adjacent to field.
5	Barracks—400 cubic feet per man .....	20' x 100' .....	Safe distance.
2	Quarters—officers', 800 cubic feet per officer.	20' x 100' .....	Safe distance.
1	Mess hall—officers'	20' x 76' .....	Near officers' quarters.
2	Latrines—enlisted .....	8' x 16' .....	Near barracks.
1	Latrine—officers'	8' x 16' .....	Near officers' quarters.
1	Warehouse and shop .....	20' x 36' .....	Adjacent to field.

**ADDITIONAL FOR HEADQUARTERS AND HEADQUARTERS SQUADRON BOMBER GROUP (L)**

1	Repair hangar .....	Undetermined .....	Adjacent to field.
6	Barracks—400 cubic feet per man .....	20' x 100' .....	Safe distance.
1	Quarters—officers', 800 cubic feet per officer.	20' x 100' .....	Safe distance.
1	Mess hall—officers'	20' x 52' .....	Near officers' quarters.
2	Latrines—enlisted .....	8' x 16' .....	Near barracks.
1	Latrine—officers'	8' x 16' .....	Near officers' quarters.

**ADDITIONAL FOR BOMBER SQUADRON (L)**

1	Repair hangar .....	Undetermined .....	Adjacent to field.
5	Barracks—400 cubic feet per man .....	20' x 100' .....	Safe distance.
1	Quarters—officers', 800 cubic feet per officer.	20' x 100' .....	Safe distance.
1	Mess hall—officers'	20' x 52' .....	Near officers' quarters.
1	Latrine—enlisted .....	8' x 16' .....	Near barracks.
1	Latrine—officers'	8' x 16' .....	Near officers' quarters.
1	Warehouse and shop—Chemical Warfare Service.	20' x 36' .....	Adjacent to field.

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## ADDITIONAL FOR RECONNAISSANCE SQUADRON (H)

Number	Purpose	Size	Location
1	Repair hangar.....	Undetermined.....	Adjacent to field.
6	Barracks—400 cubic feet per man.....	20' x 100'.....	Safe distance.
2	Quarters—Officers', 800 cubic feet per officer.	20' x 100'.....	Safe distance.
1	Mess hall—officers'	20' x 76'.....	Near officers' quarters.
2	Latrines—enlisted.....	8' x 16'.....	Near barracks.
1	Latrine—officers'	8' x 16'.....	Near officers' quarters.
1	Warehouse and shop—Chemical Warfare Service.	20' x 36'.....	Adjacent to field.

## ADDITIONAL FOR RECONNAISSANCE SQUADRON (M)

1	Repair hangar.....	Undetermined.....	Adjacent to field.
6	Barracks—400 cubic feet per man.....	20' x 100'.....	Safe distance.
3	Quarters—officers', 800 cubic feet per officer.	20' x 100'.....	Safe distance.
1	Mess hall—officers'	20' x 76'.....	Near officers' quarters.
2	Latrines—enlisted.....	8' x 16'.....	Near barracks.
1	Latrine—officers'	8' x 16'.....	Near officers' quarters.
1	Photo laboratory.....	20' x 20'.....	Safe distance.

## ADDITIONAL FOR RECONNAISSANCE SQUADRON (L)

1	Hangar repair .....	Undetermined.....	Adjacent to field.
5	Barracks—400 cubic feet per man .....	20' x 100'.....	Safe distance.
2	Quarters—officers', 800 cubic feet per officer.	20' x 100'.....	Safe distance.
1	Mess hall—officers'	20' x 60'.....	Near officers' quarters.
1	Latrine—enlisted.....	8' x 16'.....	Near barracks.
1	Latrine—officers'	8' x 16'.....	Near officers' quarters.
1	Warehouse and shop—Chemical Warfare Service.	20' x 36'.....	Adjacent to field.

**REFERENCE DATA, ADMINISTRATION**

**ADDITIONAL FOR OBSERVATION SQUADRON**

Number	Purpose	Size	Location
1	Repair hangar.....	Undetermined.....	Adjacent to field.
5	Barracks—400 cubic feet per man.....	20' x 100'.....	Safe distance.
2	Quarters—officers', 800 cubic feet per officer.	20' x 100'.....	Safe distance.
1	Mess hall—officers'.....	20' x 60'.....	Near officers' quarters.
1	Latrine—enlisted.....	8' x 16'.....	Near barracks.
1	Latrine—officers'.....	8' x 16'.....	Near officers' quarters.
1	Photo laboratory.....	20' x 20'.....	Safe distance.

**ADDITIONAL FOR OBSERVATION SQUADRON (AF)**

1	Repair hangar.....	Undetermined.....	Adjacent to field.
6	Barracks—400 cubic feet per man .....	20' x 100'.....	Safe distance.
2	Quarters—officers', 800 cubic feet per officer.	20' x 100'.....	Safe distance.
1	Mess hall—officers'.....	20' x 76'.....	Near officers' quarters.
2	Latrines—enlisted.....	8' x 16'.....	Near barracks.
1	Latrine—officers'.....	8' x 16'.....	Near officers' quarters.

**ADDITIONAL FOR HEADQUARTERS AND HEADQUARTERS SQUADRON TRANSPORT GROUP**

1	Repair hangar.....	Undetermined.....	Adjacent to field.
2	Barracks—400 cubic feet per man.....	20' x 100'.....	Safe distance.
1	Quarters and mess hall—officers'.....	20' x 100'.....	Safe distance.
1	Latrine—enlisted.....	8' x 16'.....	Near barracks.
1	Latrine—officers'.....	8' x 16'.....	Near officers' quarters.

**ARMY AIR FORCE FIELD MANUAL**

**ADDITIONAL FOR TRANSPORT SQUADRON (2-ENGINE)**

Number	Purpose	Size	Location
1	Repair hangar.....	Undetermined.....	Adjacent to field.
4	Barracks—400 cubic feet per man.....	20' x 100'.....	Safe distance.
2	Quarters—officers', 800 cubic feet per officer.	20' x 100'.....	Safe distance.
1	Mess hall—officers'.....	20' x 60'.....	Near officers' quarters.
1	Latrine—enlisted.....	8' x 16'.....	Near barracks.
1	Latrine—officers'.....	8' x 16'.....	Near officers' quarters.

**ADDITIONAL FOR HEADQUARTERS AND HEADQUARTERS SQUADRON AIR BASE GROUPS**

5	Barracks—400 cubic feet per man.....	20' x 100'.....	Safe distance.
1	Quarters—officers', 800 cubic feet per officer.	20' x 100'.....	Safe distance.
1	Mess hall—officers'.....	20' x 52'.....	Near officers' quarters.
1	Latrine—enlisted.....	8' x 16'.....	Near barracks.
1	Latrine—officers'.....	8' x 16'.....	Near officers' quarters.

**ADDITIONAL FOR MATERIEL SQUADRON**

1	Repair hangar.....	Undetermined.....	Adjacent to field.
7	Barracks—400 cubic feet per man.....	20' x 100'.....	Safe distance.
1	Quarters and mess, officers'.....	20' x 100'.....	Safe distance.
2	Latrines—enlisted.....	8' x 16'.....	Near barracks.
1	Latrine—officers'.....	8' x 16'.....	Near officers' quarters.
1	Warehouse and shop—Chemical Warfare Service.	20' x 84'.....	Adjacent to field.

**ADDITIONAL FOR AIR BASE SQUADRON**

1	Repair hangar.....	Undetermined.....	Adjacent to field.
3	Barracks—400 cubic feet per man.....	20' x 100'.....	Safe distance.
1	Quarters and mess—officers'.....	20' x 100'.....	Safe distance.
1	Latrine—enlisted.....	8' x 16'.....	Near barracks.
1	Latrine—officers'.....	8' x 16'.....	Near officers' quarters.

## REFERENCE DATA, ADMINISTRATION

## SECTION V

## WEIGHTS AND MEASURES

## ■ 1. CONVERSION FACTORS.

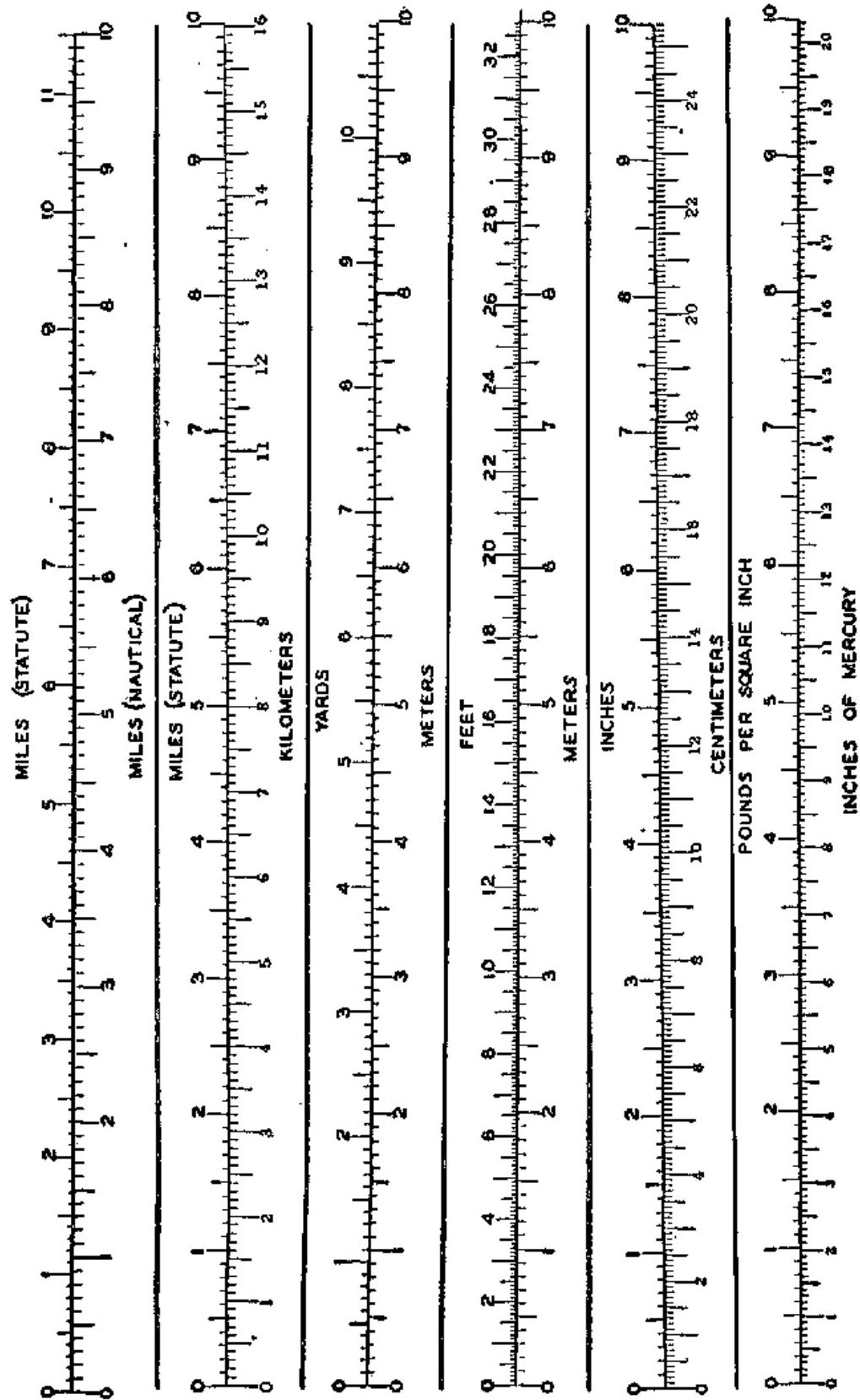
To convert—	Into—	Multiply by—
Acres.....	Hectares.....	0.4047
F°.....	C°.....	(F°-32)×5/9
Centimeters.....	Inches.....	0.3937
Cubic centimeters.....	Cubic inches.....	0.0610
Cubic feet.....	Cubic meters.....	0.0283
Cubic inches.....	Cubic centimeters.....	16.3872
Cubic inches.....	Liters.....	0.0164
Cubic meters.....	Cubic feet.....	35.3144
Cubic meters.....	Cubic yards.....	1.3079
Cubic yards.....	Cubic meters.....	0.7646
Hundredweights.....	Quintals (metric).....	0.508
C°.....	F°.....	(C°×9/5)+32
Feet.....	Meters.....	0.3048
Feet per minute.....	Miles per hour.....	0.01137
Feet per second.....	Miles per hour.....	0.6818
Feet per second.....	Meters per minute.....	18.288
Gallons (imperial).....	Liters.....	4.543
Gallons (U. S.).....	Liters.....	3.7853
Gallons (imperial).....	Cubic feet.....	0.1605
Gallons (U. S.).....	Cubic feet.....	0.1337
Grains.....	Grammes.....	0.0648
Grammes.....	Grains.....	15.4324
Grammes.....	Ounces (avoirdupois).....	0.03527
Hectares.....	Acres.....	2.4710
Imperial gallons.....	U. S. gallons.....	1.201
Inches.....	Centimeters.....	2.5399
Inches.....	Feet.....	0.0833
Inches.....	Meters.....	0.0254
Inches.....	Millimeters.....	25.4001
Inches.....	Yards.....	0.0277
Kilogrammes (1,000 gms.).....	Pounds (avoirdupois).....	2.2046
Kilogrammes.....	Ounces (avoirdupois).....	35.2739
Kilometers.....	Miles.....	0.62137
Knots.....	Mph.....	1.1516
Pound (7,000 gms.).....	Kilogrammes.....	0.45359
Liters.....	Cubic inches.....	61.025
Liters.....	Gallons (imperial).....	0.220
Liters.....	U. S. gallons.....	0.26418
Liters.....	Pints (imperial).....	1.76
Liters.....	Pints (U. S.).....	2.1134

**ARMY AIR FORCE FIELD MANUAL**

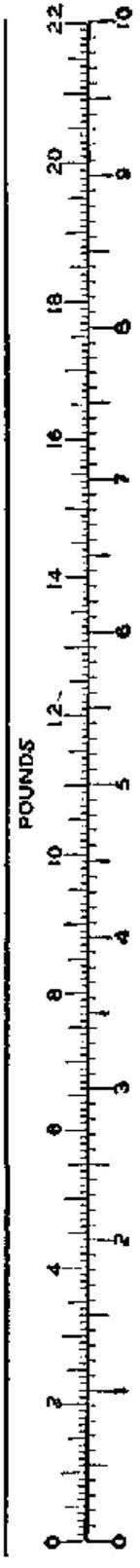
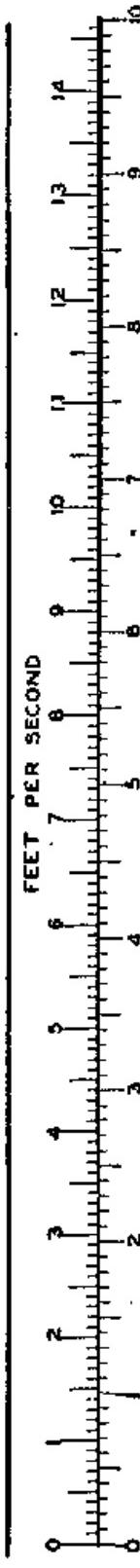
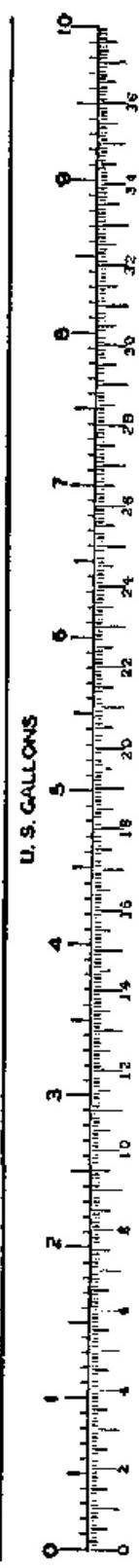
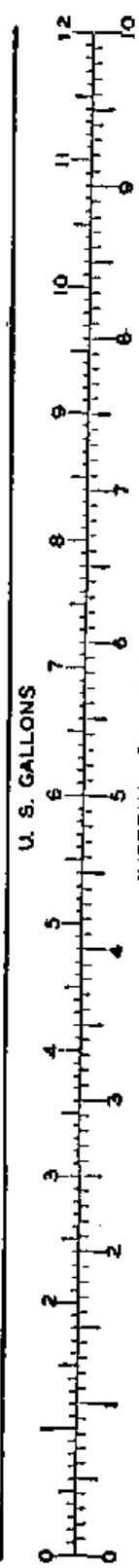
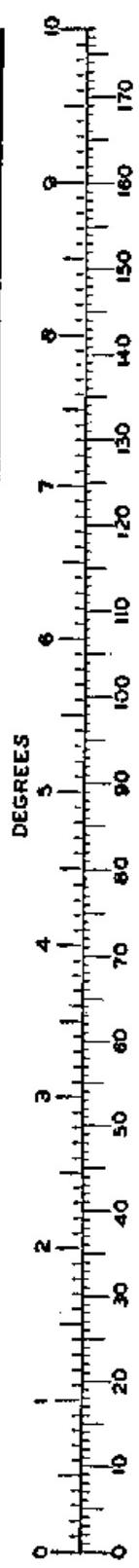
To convert—	Into—	Multiply by—
Meters.....	Feet.....	3.2808
Meters.....	Inches.....	39.37
Meters.....	Yards.....	1.0936
Meters per minute.....	Feet per second.....	0.0547
Meters per second.....	Mph.....	2.237
Miles.....	Kilometers.....	1.6093
Miles per hour.....	Feet per minute.....	88.
Miles per hour.....	Feet per second.....	1.467
Miles per hour.....	Knots.....	0.8684
Miles per hour.....	Meters per second.....	0.447
Millimeters.....	Inches.....	0.0393
Ounces (avoirdupois).....	Grammes.....	28.349
Ounces (avoirdupois).....	Kilogrammes.....	0.02335
Pints (imperial).....	Liters.....	0.568
Pints (U. S.).....	Liters.....	0.4732
Quintals (metric).....	Hundredweights.....	1.97
Square centimeters.....	Square inches.....	0.155
Square feet.....	Square meters.....	0.0929
Square inches.....	Square centimeters.....	6.4516
Square kilometers.....	Square miles.....	0.3861
Square meters.....	Square feet.....	10.764
Square meters.....	Square yards.....	1.1960
Square miles.....	Square kilometers.....	2.590
Square yards.....	Square meters.....	0.8361
U. S. gallons.....	Imperial gallons.....	0.8327
Yards.....	Meters.....	0.914

REFERENCE DATA, ADMINISTRATION

**E 2. GRAPHIC EQUIVALENTS.**



**ARMY AIR FORCE FIELD MANUAL**



**REFERENCE DATA, ADMINISTRATION**

**■ 3. GASOLINE, OIL, AND WATER.**

	Pounds per gallon*	Pounds per cubic foot	Pounds per barrel (42 gals.)
Gasoline.....	6.1	45.6	256.2
Oil, lubricating.....	7.0	52.4	294.0
Water, fresh.....	8.355	62.4	340.9

\*Weight of container not included. Commercial 10-gallon milk cans weigh approximately 27 pounds.

**■ 4. MISCELLANEOUS.**

A fathom=6 feet.

A league=3 miles.

A nautical or geographical mile=2,026  $\frac{2}{3}$  yards.

An acre=43,560 square feet.

A square mile=640 acres.

A ship ton=40 cubic feet.

A cord of wood=128 cubic feet (8' x 4' x 4').

**■ 5. MENSURATION OF SURFACES AND SOLIDS.**

Circumference of a circle=diameter  $\times$  3.1416.

Area of a triangle=base  $\times$  perpendicular  $\div$  2.

Area of a square or oblong=length  $\times$  breadth.

Area of a circle=diameter  $^2 \times$  0.7854, or radius  $^2 \times$  3.1416.

Area of sector of circle=length of arc  $\times$  radius  $\div$  2.

Area of any right-lined figure of four or more unequal sides is found by dividing it into triangles, finding the area of each, and adding together.

Area of an ellipse=long axis  $\times$  short axis  $\times$  0.7854.

Surface of prism or cylinder=(area of two ends) + (length  $\times$  perimeter).

Surface of cone or pyramid= $\frac{1}{2}$  (slant height  $\times$  perimeter of base) + area of base.

Surface of cube=sum of areas on all the sides.

Surface of sphere=square of diameter  $\times$  3.1416.

Cubic content of prism or cylinder=area of base  $\times$  height.

Cubic content of cone or pyramid= $\frac{1}{3}$  (area of base  $\times$  perpendicular height).

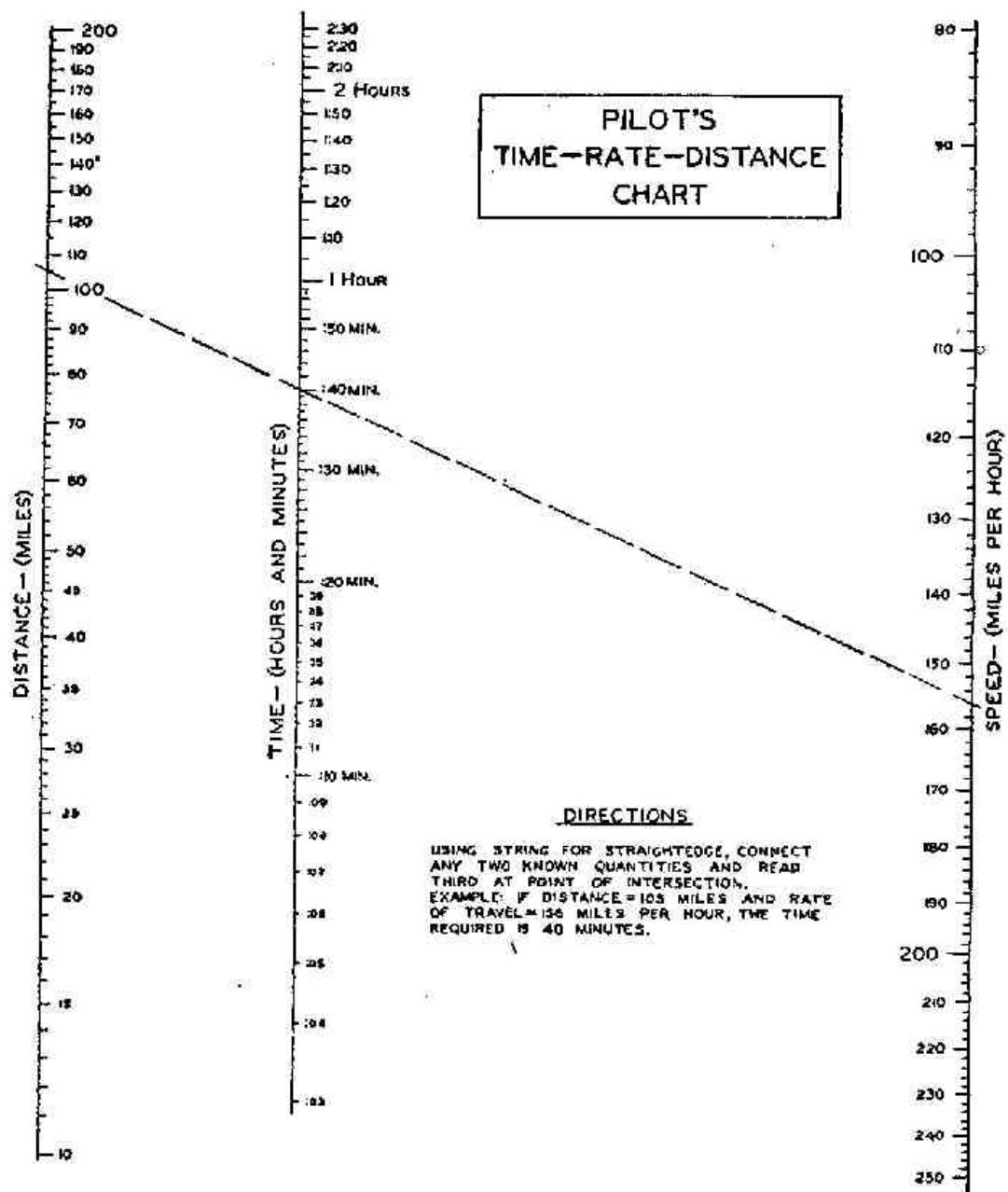
Cubic content of cube=length  $\times$  breadth  $\times$  depth.

Cubic content of sphere=cube of diameter  $\times$  0.5236.

ARMY AIR FORCE FIELD MANUAL

SECTION VI

PILOT'S TIME, RATE, AND DISTANCE CHART



## REFERENCE DATA, ADMINISTRATION

## SECTION VII

## WORLD STANDARD TIMETABLE

Location	Time fast (+) or slow (-) on Greenwich mean time		
	Hours	Minutes	Seconds
Aden	+2	59	54
Africa, French Equatorial	+1	0	0
Africa, Portuguese East (Mozambique)	+2	0	0
Africa, Portuguese West (Angola)	+1	0	0
Africa, south-west (mandated territory)	+2	0	0
Alaska (central zone)	-10	0	0
Alaska (extreme eastern coast zone)	-9	0	0
Alaska (western zone)	-11	0	0
Albania	+1	0	0
Alcutian Island	-11	0	0
Algeria	0	0	0
Andorra	0	0	0
Anglo-Egyptian Sudan	+2	0	0
Angola (Portuguese West Africa)	+1	0	0
Argentine Republic	-4	0	0
Ascension Island	-1	0	0
Australia (New South Wales)	+10	0	0
Australia (northern territory)	+9	30	0
Australia (Queensland)	+10	0	0
Australia, South	+9	30	0
Australia (Tasmania)	+10	0	0
Australia (Victoria)	+10	0	0
Australia, Western	+8	0	0
Austria	+1	0	0
Azores	-2	0	0
Bahamas	-5	0	0
Bali Island, Dutch East Indies	+7	30	0
Basutoland	+2	0	0
Belgian Congo	+1	0	0
Belgium	0	0	0
Bermuda	-4	0	0
Bolivia	-4	33	0
Borneo, British North	+8	0	0
Borneo, Dutch	+7	30	0
Brazil (central zone)	-4	0	0
Brazil (eastern zone)	-3	0	0
Brazil (far western zone)	-5	0	0
Brazil (Fernando de Noronha Island and Trinidad Island)	-2	0	0
British Isles	0	0	0

**ARMY AIR FORCE FIELD MANUAL**

Location	Time fast (+) or slow (-) on Greenwich mean time		
	Hours	Minutes	Seconds
Bulgaria.....	+2	0	0
Burma.....	+6	30	0
Cameroons, British.....	+1	0	0
Cameroons, French.....	+0	38	44.3
Canada ("Atlantic" standard time): New Brunswick, Nova Scotia (including Sable Island), Prince Edward Island Quebec Province (eastern zone).....	-4	0	0
Canada ("Eastern" standard time): Quebec Province (western zone), Ontario (eastern and central zones,) etc.....	-5	0	0
Canada ("Central" standard time): Ontario (western zone), Manitoba, Saskatchewan (far eastern zone), etc.....	-6	0	0
Canada ("Mountain" standard time): Saskatchewan (main zone), Alberta, etc.....	-7	0	0
Canada ("Pacific" standard time): British Columbia, etc.....	-8	0	0
Canada (Yukon territory).....	-9	0	0
Canary Islands.....	-1	0	0
Cape Verde Islands.....	-2	0	0
Caroline Islands (western zone).....	+9	0	0
Caroline Islands (central zone).....	+10	0	0
Caroline Islands (eastern zone).....	+11	0	0
Cayman Islands .....	-5	25	36
Celebes.....	+8	0	0
Ceylon.....	+5	30	0
Chile.....	-5	0	0
Chinese Republic (coastal zone): Shanghai, Peiping, Nanking, Hankow.....	+8	0	0
Chinese Republic (far south zone).....	+7	0	0
Chinese Republic (Hainan).....	+7	0	0
Colombia.....	-5	0	0
Costa Rica.....	-6	0	0
Cuba.....	-5	0	0
Curacao.....	-4	36	0
Cyprus.....	+2	0	0
Czechoslovakia.....	+1	0	0
Dahomey.....	0	0	0
Danzig.....	+1	0	0
Denmark.....	+1	0	0
Dominican Republic (San Domingo).....	-4	40	0
Ecuador (except Guayaquil).....	-5	14	6.7
Ecuador (Guayaquil).....	-5	19	24
Egypt.....	+2	0	0
Eritrea.....	+3	0	0

**REFERENCE DATA, ADMINISTRATION**

Location	Time fast (+) or slow (-) on Greenwich mean time		
	Hours	Minutes	Seconds
Estonia	+2	0	0
Falkland Islands	-4	0	0
Faroe Islands	0	0	0
Fiji Islands	+12	0	0
Finland	+2	0	0
Formosa	+8	0	0
France	0	0	0
Gambia	-1	0	0
Germany	+1	0	0
Gibraltar	0	0	0
Gold Coast	0	0	0
Greece (with Crete)	+2	0	0
Greenland (Scoresby Sound zone)	-2	0	0
Greenland (west coast zone)	-3	0	0
Guam Island	+10	0	0
Guatemala	-6	0	0
Guiana, British	-3	45	0
Guiana, Dutch	-3	40	35
Guiana, French	-4	0	0
Guinea, French	-1	0	0
Guinea, Portuguese	-1	0	0
Guinea, Spanish	0	0	0
Haiti	-5	0	0
Hawaiian Islands (including Midway Island)	-10	30	0
Holland	+0	19	32.1
Honduras	-6	0	0
Honduras, British	-6	0	0
Hong Kong	+8	0	0
Hungary	+1	0	0
Iceland	-1	0	0
India (except Calcutta district)	+5	30	0
India (Calcutta district)	+5	53	20.8
Indo-China, French	+7	0	0
Iraq	+3	0	0
Irish Free State	0	0	0
Italy (including Sardinia and Sicily)	+1	0	0
Ivory Coast	0	0	0
Jamaica	-5	0	0
Japan (including Kuril Islands)	+9	0	0
Java	+7	30	0
Jugoslavia	+1	0	0
Kenya	+2	30	0
Korea	+9	0	0
Labrador	-3	31	0
Ladrone (or Mariannas) Islands	+10	0	0

## ARMY AIR FORCE FIELD MANUAL

Location	Time fast (+) or slow (-) on Greenwich mean time		
	Hours	Minutes	Seconds
Latvia	+2	0	0
Leeward Islands (British)	-4	0	0
Leeward Islands (French)	-4	0	0
Leeward Islands (U. S. A.)	-4	0	0
Liberia	-0	44	0
Libya	+1	0	0
Lithuania	+1	0	0
Luxembourg	0	0	0
Madagascar	+3	0	0
Madeira	-1	0	0
Maldiva Islands	+4	54	0
Malta	+1	0	0
Marianas or Ladrone Islands	+10	0	0
Marshall Islands	+11	0	0
Mauritania	-1	0	0
Mexico (except northern zone in Lower California)	-6	0	0
Mexico (northern zone in Lower California)	-8	0	0
Molucca Islands, Dutch East Indies (including Ternate Island and Amboina Island)	+8	0	0
Monaco	0	0	0
Morocco (French and Spanish)	0	0	0
Mozambique (Portuguese East Africa)	+2	0	0
Nauru	+11	0	0
New Britain	+10	0	0
New Caledonia	+11	0	0
Newfoundland	-3	31	0
New Hebrides	+11	0	0
New Ireland	+10	0	0
New Zealand	+11	30	0
Nicaragua	-5	45	10
Nigeria	+1	0	0
Norfolk Island	+11	12	0
Norway	+1	0	0
Palestine	+2	0	0
Panama (including Canal Zone)	-5	0	0
Paraguay	-3	27	12
Peru	-5	0	0
Philippine Islands	+8	0	0
Pitcairn Island	-10	0	0
Poland	+1	0	0
Porto Rico	-4	0	0
Portugal	0	0	0
Principe Island	0	0	0
Reunion Island	+4	0	0
Rhodes Island (to Italy)	+2	0	0

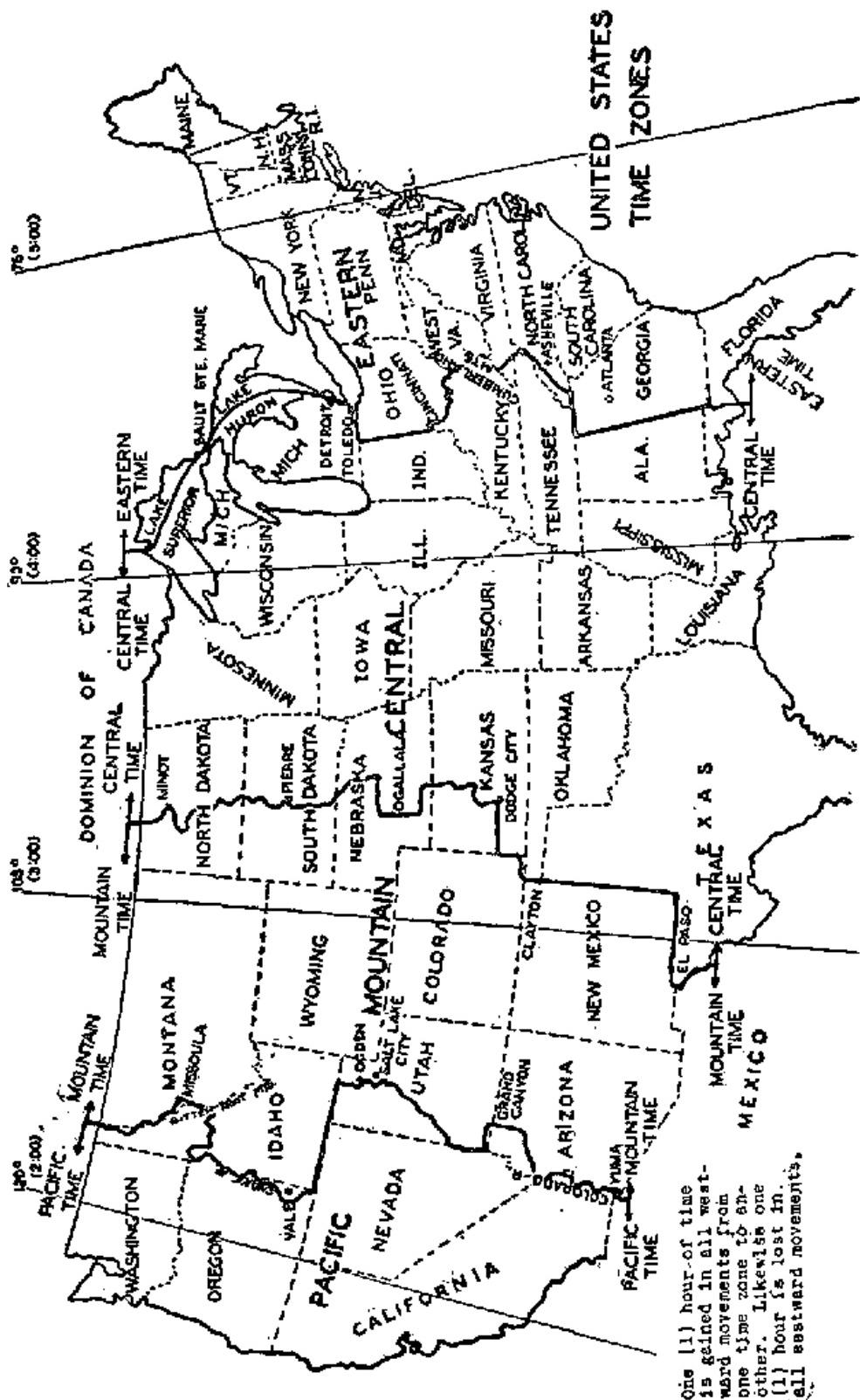
## REFERENCE DATA, ADMINISTRATION

Location	Time fast (+) or slow (-) on Greenwich mean time		
	Hours	Minutes	Seconds
Rhodesia, Northern.....	+2	0	0
Rhodesia, Southern.....	+2	0	0
Rio de Oro (Spanish Sahara).....	-1	0	0
Roumania.....	+2	0	0
St. Helena.....	-0	23	0
Salvador.....	-6	0	0
Samoan Island.....	-11	0	0
San Domingo (Dominican Republic).....	-4	40	0
Sarawak.....	+7	30	0
Senegal.....	-1	0	0
Somaliland, British.....	+2	59	54
Somaliland, French.....	+3	0	0
Somaliland, Italian.....	+3	0	0
South Georgia.....	-2	7	0
Spain.....	0	0	0
Straits Settlements.....	+7	20	0
Sumatra (north-west zone).....	+6	30	0
Sumatra (south-east zone).....	+7	0	0
Sumba, Dutch East Indies.....	+8	0	0
Sumbawa, Dutch East Indies.....	+8	0	0
Swaziland.....	+2	0	0
Sweden.....	+1	0	0
Switzerland.....	+1	0	0
Syria.....	+2	0	0
Tahiti Island.....	-10	0	0
Tangier.....	0	0	0
Thailand.....	+7	0	0
Timor.....	+8	0	0
Trinidad.....	-4	0	0
Tripolitania.....	+1	0	0
Tunisia.....	+1	0	0
Turkey (Europe and Asia).....	+2	0	0
Union of South Africa (including South-West Africa).....	+2	0	0
U. S. A. ("Eastern" standard time): Maine, Vermont, New Hampshire, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Maryland, Delaware, Pennsylvania, North and South Caro- lina, Virginia, West Virginia, Washington, D. C. etc.....	-6	0	0
U. S. A. ("Central" standard time): Illinois, Iowa, Michigan, Minnesota, Wisconsin, Indiana, Mis- souri, Arkansas, Oklahoma, Alabama, Missis- sippi, Louisiana, Texas, etc.....	-6	0	0

## ARMY, AIR FORCE FIELD MANUAL

Location	Time fast (+) or slow (-) on Greenwich mean time		
	Hours	Minutes	Seconds
U. S. A. ("Mountain" standard time): Montana, Idaho (except northern zone), Wyoming, Arizona, Colorado, Utah, etc.	-7	0	0
U. S. A. ("Pacific" standard time): California, Nevada, Oregon, Washington, Idaho (northern zone), etc.	-8	0	0
U. S. S. R. (Moscow-Leningrad-Ukraine zone)	+2	0	0
U. S. S. R. (Astrakhan,Tiflis-Archangel zone)	+3	0	0
U. S. S. R. (Khiva-Aral Sea zone)	+4	0	0
U. S. S. R. (Omsk-Tobolsk zone)	+5	0	0
U. S. S. R. (Tomsk zone)	+6	0	0
U. S. S. R. (Irkutsk zone)	+7	0	0
U. S. S. R. (Yakutsk zone)	+8	0	0
U. S. S. R. (Okhotsk-Vladivostok zone)	+9	0	0
U. S. S. R. (Yamsk zone)	+10	0	0
U. S. S. R. (Gijinsk-Petropavlovsk zone)	+11	0	0
Uruguay	-3	30	0
Venezuela	-4	30	0
Yugoslavia	+1	0	0

**SECTION VIII**  
**UNITED STATES TIME ZONES**



One [1] hour of time  
is gained in all west-  
ward movements from  
one time zone to an-  
other. Likewise one  
[1] hour is lost in  
all eastward movements.

ARMY AIR FORCE FIELD MANUAL

SECTION IX

GENERAL CHARACTERISTICS OF WARSHIPS<sup>1</sup>

Type	Symbol	Displacement (tons)	Draught (mean feet)	Speed (designed knots)	Armament (guns)				Armor (inches)
					Main battery	Secondary battery	Main belt (ins.)	Turrets and barbettes or gun shields (ins.)	
Battleship . . .	BB	25,000 to 40,000	25 to 36	22 to 30	8 to 12 11 inches to 16 inches.	24,000 to 35,000 5 inches to 6 inches.	8 to 20 17,000	5½ to 16	5 to 16 3 to 10½
Cruiser, battle.	CC	32,000 to 42,000	26 to 29	29 to 31	6 to 8 8 inches to 15 inches.	24,000 to 35,000	8 to 12 14 inches to 5.5 inches.	9 to 12 17,000	11 to 13 3 to 6½
Cruiser, heavy	CA	15 to 20	15 to 20	32 to 36	6 to 10 8 inches	18,000 to 35,000	4 to 12 3.9 inches to 5 inches.	0 to 5½ 15,000	0 to 6 0 to 6
Cruiser, light..	CL	13 to 17	13 to 17	29 to 41	5 to 15 5.3 inches to 6.1 inches.	18,000 to 35,000	2 to 12 3 inches to 4 inches.	0 to 4½ 15,000	0 to 5½ 0 to 3
Aircraft carrier ..	CV	15 to 25	15 to 25	22 to 34	8 to 16 4.6 inches to 8 inches.	15,000 to 22,000	varying 5 inches or smaller. 20,000	0 to 6 15,000	1 to 5
Destroyer-----	DD	8 to 15	8 to 15	34 to 39	3 to 8 4 inches to 5.5 inches. <sup>1</sup>	15,000	.....	.....	.....

REFERENCE DATA, ADMINISTRATION

Submarine . . . . .	SS	250 to 2,880 <sup>3</sup>	13 to 20 inches.	1 to 4 inches.	8 to 15,000	7,000 to 15,000
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<sup>1</sup> Data included in this table are based on average characteristics of warships of great naval powers.

<sup>2</sup> Dual-purpose guns which may be used for firing at aerial, naval, or land targets.

<sup>3</sup> Surface.

**ARMY AIR FORCE FIELD MANUAL**

**SECTION X**

**WEIGHT DATA ON EQUIPMENT OF U. S. ARMY  
PARACHUTE TROOPS AS OF MAY 12, 1941**

Total weight of equipment carried on person of parachutist, including two parachutes with harness, etc., 54½ pounds.

NOTE.—Quick-attachable reserve parachute will be worn in combat if jumping height so warrants.

Additional parachute squad (12 men), equipment is packed into three containers, each with a maximum pay load of 185 lbs., which are ejected manually.

NOTE.—This figure does not include the weight of the aerial delivery unit.

SECTION XI

AERONAUTICAL TERMS IN ENGLISH, SPANISH,  
FRENCH, GERMAN, ITALIAN

English	Spanish	French	German	Italian
Aerial, fixed.	antena fija.	Antenne fixe.	Feste Antenne.	Antenna fissa.
Aerial observer.	observador aéreo.	observateur aérien.	Luftbeobachtung.	Asservatore aerea.
Aerial, trailing.	antena remolcada.	Antenne remorquée.	Hängeantenne.	Antenna rimorchiatà.
Ailerons.	aerones.	Ailerons.	Querruder.	Alettoni.
Aircraft.	aeronave.	Aeronet.	Luftfahrzeug.	Aeromobile.
Airdrome.	“aparato” (Eng. “craft”).	Aérodrome.	Flugplatz.	Campo di aviazione.
Airdrome lighting.	aeródromo, campo de aviación.	Balisage de nuit d'aeródrome.	Flughafenfeuerung und Beleuchtung.	Illuminazione di campo di aviazione.
Airframe.	célula, estructura total de la aleta, fuselaje (sin motor).	Cellule.	Tragwerk.	Cellula.
Airplane.	aeroplano, avión, “aparato” (Eng. “‘plane”).	Avion.	Flugzeug.	Velivolo.
Airplane engine.	motor de avión, m. de aeronáculo, m. de aviación.	Moteur d'aviation or aéromoteur.	Flugmotor.	Motore di aviazione.
Airplane, pusher.	avión (aeroplano) de motor propulsor, a. de hélice propulsora.	Avion à hélice propulsive.	Druckschrauber.	Velivolo ad elica propulsiva.

**ARMY AIR FORCE FIELD MANUAL**

English	Spanish	French	German	Italian
Airplane, tractor.	avión (acoplano) de tracción, a. de hélice de tracción, a. de hélice tractora, a. de hélice delantera, a. de motor trac- tor, a. de motor delantero.	Avion à hélice tractrice. aeronaute, aéronaute.	Zugschrauber.	Velivolo ad elica trattiva.
Airport.	aeropuerto, paradero (esta- ción) para aeroplanos (avi- ones).	Aéroport.	Flughafen.	Aeroporto.
Air route.	ruta aérea, aeroruta.	Route aérienne.		Rotta aerea.
Airship.	aeronave, aerovenículo, diri- gible.	Dirigeable.	Luftschiff.	Dirigibile.
Air speed.	velocidad con relación al aire.	Vitesse relative.	Eigengeschwindigkeit. angezeichnete Ge- schwindigkeit.	Velocità relativa. Velocita relativa indicata.
Air speed, indicated.	velocidad indicada con relación al aire.	Vitesse relative indiquée.	Flugstreckenfener.	Faro di rotta.
Airway beacon.	aerofaro.	Phare di ligne.		
Altimeter.	altímetro.	Altimètre.	Höhenmesser.	Altimetro.
Altitude, rated.	altura de restablecimiento.	Altitude nominale.	Höhe, gerechnete.	Quota nominale.
Alto-cumulus.	alto-cúmulo.	Altocumulus.	Altocumulus.	Alto-cumuli.
Alto-stratus.	alto-astrato.	Altostatus.	Windmesser.	Anemometro.
Anemometer.	anemómetro.	Anémomètre.	Anstellwinkel.	Angolo di incidenza.
Angle of incidence.	ángulo de incidencia.	Angle d'incidence.	Hochdruckgeblet.	Anticiclone.
Anticyclone.	anticiclón.	Anticyclone.	Entsicherungsflügel.	Aletta di armamento.
Arming vanes.	aletas (veletas) de armar, s. de seguridad.	Ailettes d'armement.		Orizzonte artificiale.
Artificial horizon.	horizonte artificial.	Horizon artificial.	Künstlicher Horizont.	Orizzonte artificiale.

**REFERENCE DATA, ADMINISTRATION**

Aspect ratio.	alargamiento.	Allongement.
Ambient pressure.	presión atmosférica.	Pressione atmosferica.
Auxiliary parachute.	paracaidas de cebó, paracaidas piloto.	Paracadute ausiliario.
Auxiliary tank.	tanque auxiliar.	Serbatoio ausiliario.
Ballast.	lastre.	Zavorra.
Balloon.	globo, g. aerostático.	Pallone.
Balloon barrage.	barrera de globos.	Sbarramento con palloni.
Balloon, captive.	globo cautivo.	Fesselballon.
Barometer.	barómetro.	Barometro.
Bar, rudder.	barra de dirección, palanca de pedales.	Seitensteuer.
Beacon.	aerofaro, faro.	Leuchtfeuer.
Beacon, airrome.	aerofaro (faro) de campo de aterrizaje.	Platzfeuer.
	aerofaro (faro) de ruta aérea.	Flugstreckenfeuer.
	aerofaro (faro) de marca.	Ortungsfeuer.
	plancha (placa) de apoyo.	Pilscheive.
	biplano.	Doppeldecker.
	chubasco de nieve.	Schneesturm.
	bomba.	Bombe.
	bombardero, avión de bombardero.	Viseur bombardier.
	bomba incendiaria.	Brandbombe.
	aparato portabombas, portabombas, lanzabombas.	Bombenträger.
	palanca lanzamiento de bombas.	Bombenabwurfkontrolle.
Bomb-release control.	lanzamiento de bombas.	Commande de lancement de bombes.
Boundary light.	alumbrado de límites, luz de limitación, l. de límite.	Feu de délimitation de terrain.
		Luce limite del terreno.

**ARMY AIR FORCE FIELD MANUAL**

English	Spanish	French	German	Italian
Brake horsepower.	potencia al freno, caballos de fuerza al freno.	Puissance au frein.	Bremspferdestärke.	Potenza al freno.
Breeze.	brisa, viento suave.	Brise.	Brise.	Brezza.
Breeze, land.	brisa de tierra.	Brise de terre.	Landbrise.	Brezza di terra.
Breeze, sea.	brisa de mar.	Brise de mer.	Seebreeze.	Brezza di mare.
Bubble sextant.	sextante de burbuja.	Sextant à bulle.	Blasen-sextant.	Sestante a bolla.
Calm.	calma, tranquilidad.	Calm.	Windstille.	Calmà.
Camber.	cumba, combadura, curvatura.	Courbure (cambure).	Wölbung.	Curvatura.
Carburetor.	carburador.	Carburateur.	Carburetor.	Carburatore.
Ceiling, absolute.	techo absoluto, altura máxima.	Plafond pratique.	Absolute Gipfelhöhe.	Quota di tangenza pratica.
Ceiling, service.	techo de servicio, techo práctico.	Plafond d'utilisation.	Betriebsgipfelhöhe.	Quota di navigazione.
Centre of pressure.	centro de presión.	Centre de pression.	Druckpunkt.	Centro di pressione.
Centre section.	cabaña, parte central.	Section centrale.	Mittelfügel.	Sezione centrale.
Cirro-cumulus.	Cirro-cúmulo, cielo aborregado, cirros con cumulo.	Cirro-cumulus.	Cirrocumulus.	Cirro-cumuli.
Cirro-stratus.	cirro-estrato, cirros con estrato, cirros.	Cirro-stratus.	Cirrostratus.	Cirro-strati.
Cirrus.	indicador de la velocidad de ascenso (de descenso), variómetro.	Cirrus.	Cirrus.	Cirri.
Climb (or descent) indicator, rate of.	indicador de la velocidad de ascenso (de descenso), variómetro.	Indicateur de vitesse ascendante (ou de descente), nuages aitas.	Aufsteiggeschwindigkeit (Fallgeschwindigkeit) —zeiger.	Indicatore della velocità di salita (o di discesa).
Clouds, high.	nubes altas.	Nuages élevés.	Wolken, höhen.	Nubi superiori.
Clouds, low.	nubes bajas.	Nuages bas.	Wolken, niedrigen.	Nubi inferiori.
Cockpit.	puesto de pilotaje, cabina.	Poste de pilotage.	Führersitz.	Posto di pilotaggio.
Cold front.	frente de aire frío.	Front froid.	Kaltfront.	Fronte fredda.
Commercial load.	carga comercial, carga de pago.	Charge commerciale.	Nutzlast.	Carico commerciale.
Compass.	brújula, compás, aguja.	Boussole.	Kompass.	Bussola.

**REFERENCE DATA, ADMINISTRATION**

Compass base.	montaje de la brújula (aguja).	Plattform di compensazione della bussola.
Compass course.	curso de brújula.	Rotta alla bussola.
Consumption, oil.	consumo de aceite.	Consumo di lubrificante.
Consumption, petrol.	consumo de gasolina (esencia), e. de combustible.	Consumo di benzina.
Control lever.	palanca de mando.	Leva di comando.
Coolers (oil).	aparatos para el enfriamiento por aceite.	Radiatore per il raffreddamento dell'olio.
Course.	rumbo, ruta, derotero, recorrido.	Percorso di navigazione.
Course-and-distance calculator.	calculador de vuelos.	
Course, compass.	rumbo conforme a la brújula (aguja).	Kurs- und Entfernungsmesser.
Course, magnetic.	rumbo conforme a la derivación y declinación magnética.	Kompasskurs.
Course, true.	rumbo astronómico.	Missweisender Kurs.
Cowling.	capotaje.	Rechtweisender Kurs.
Crankcase.	cárter (del cigüenal).	Haube.
Crankshaft.	Cigüena, eje secundario, eje motor, árbol de manivela.	Kurbelgehäuse.
Cumulo-nimbus.	nimbo con cúmulo.	Kurbelwelle.
Cumulus.	cúmulo.	Cumulonimbus.
Cylinder.	cilindro.	Cumulus.
Depression.	depresión.	Cylindere.
Detonator.	detonador, detonante.	Unterdruck.
Dihedral angle.	diedro, ángulo diedro.	Dépression.
Directional gyro.	giroscópico de dirección.	Capsule explosive.
Drag.	resistencia al avance.	(Angle de) dièdre.
		(Angolo) diedro.
		Giroscopio di direzione.
		Resistenza.

**ARMY AIR FORCE FIELD MANUAL**

English	Spanish	French	German	Italian
Drift.	deriva. ángulo de deriva.	Dérive. Angle de dérive.	Abtrieft. Abtriebwinkel.	Deriva. Angolo di deriva.
Drift angle.				Spruzzatore.
Drizzle.	llovizna.			Vestiti con riscaldamento elettrico.
Electrically-heated clothing.	traje con calefacción eléctrica.			Occhiali con riscaldamento elettrico.
Electrically-heated goggles.	gafas protectoras con calefacción eléctrica.	Lunettes chauffées électriquement.	Elektrische geheizte Brille.	Timone di profondità.
Elevator.	timón de profundidad.	Gouvernail de profondeur.	Höhensteuer.	
Endurance.	resistencia, duración.			Autonomia (di ore).
Engine, in-line.	motor de cilindros en linea.	Moteur vertical à cylindres en ligne.	Reihenmotor.	Motore fisso a cilindri allineati.
Engine, radial.	motor radial, motor en estrella.	Moteur en étoile.	Sternmotor.	Motore a stella.
Engine speeds.	velocidades del motor.	Vitesse de moteur.	Motorgeschwindigkeiten.	Velocità di motore.
Engine, V.	motor de cilindros en V.	Moteur à V.	V-motor.	Motore a V.
Fabric.	tela.	Toile.	Stoff.	Tela.
Fairing.	miembro reductor de resistencia.	Caténage.	Verkleidung,	Carenatura.
Fin.	aleta, empenaje.	Plan fixe vertical.	Seitendosse.	Piano fisso verticale.
Flaps.	aleron, aletas.	Volets.	Hilfsflügel, Klappe.	Deflettori.
Flare, navigation.	cohete de navegación, bomba de iluminación para la navegación.	Fusée de navigation.	Ortsungsleuchtkugel.	Palla di navigazione.
Flare, parachute.	cojete de paracaidas.	Fusee éclairante à parachutage.	Fallschirmleuchtkugel.	Palla lucente a paracadute.
Flashing light.	luz intermitente, luz de eclipse.		Blinkfeuer.	Fuoco a lampi.
Float, seaplane.	flotador de hidro (de hidroavión).	Feu à éclats.	Schwimmerflugzeug.	Galleggiante d'idrovolante.

**REFERENCE DATA, ADMINISTRATION**

<b>Float, tail.</b>	Flotteur de queue.	Schwanzschwimmer.
<b>Float, wing-tip</b>	Flotteur del punto de ala, f. en el extremo del ala.	Flügelschwimmer.
<b>Flutter.</b>	vibración oscilante.	Tremolio.
<b>Flying boat.</b>	hidroavión, hidro.	Idrovoltante a scafo.
<b>Flying operation.</b>	servicio aéreo.	Operazione di volare.
<b>Fog.</b>	niebla, bruma.	Nebbia.
<b>Fog, sea.</b>	niebla de mar.	Nebbia di mare.
<b>Force, Beaufort scale of wind.</b>	escala anemográfica de Beaufort.	Forza del vento secondo la scala di Beaufort.
<b>Forecast.</b>	pronóstico, previsión, predicción.	Provisione.
<b>Frost.</b>	helada, rosada.	Brina.
<b>Fuel-contents gage</b>	indicador del consumo de combustible, indicador del nivel de esencia.	Indicatore del livello del combustibile.
<b>Fuselage.</b>	fuselaje.	Fusoliera
<b>Gage, pressure.</b>	manómetro.	Manometro.
<b>Generator, smoke.</b>	aparato fumígeno, aparato para producir humo.	Generatore di fumo.
<b>Glide.</b>	vuelo planeado, planear.	Volo librato.
<b>Glider.</b>	planeador.	Libratore.
<b>Gliding angle.</b>	ángulo de planeo.	Angolo di volo librato.
<b>Goggles.</b>	gafas, g. protectoras.	Occhiali.
<b>Gravity tank.</b>	tanque de alimentación por gravedad.	Serbatoio d'alimentazione per gravità.
<b>Gun, fixed.</b>	cáñon fijo.	Cannone fisso.
<b>Gun, flexible.</b>	cáñon doblegable.	Cannone mobile.

**ARMY AIR FORCE FIELD MANUAL**

English	Spanish	French	German	Italian
Gun heater.	aparato para la calefacción de la ametralladora.	Dispositif de réchauffage du canon.	Gewehrheizvorrichtung.	Dispositivo di riscaldamento del cannone.
Gun mounting.	montaje de cañón.	Affût.	Lafette.	Castello cannone.
Hanger.	hangar.	Hangar.	Schuppen.	tettoia.
Haze.	bruma, niebla.	Brume sèche.	Dunst.	Nebbia (secca), caligine.
Height, cloud.	altura de nubes.	Hauteur du nuage.	Wolkenhöhe.	Altezza della nube.
Helicopter.	helicóptero.	Hélicoptère.	Helikopter, Hubschrauber.	Elicottero.
Horsepower.	caballo de fuerza, caballo de vapor, C. V.	Puissance (chevaux).	Motorleistung.	Potenza.
Hull.	fuselaje, casco.	Coque.	Boot.	Sciafo.
Ice formation.	formación he dielo, capa de hielo, corteza de bieло.	Formation de glace.	Vereisung, Eisansatz.	Formazione di ghiaccio.
Identification light.	alumbrado de identificación, luz de identificación, luz identificadora.	Feu d'identification.	Zusatzzfeuer.	Luce di identificazione.
Indicator, rate-of-climb (or descent).	indicador de la velocidad de ascenso (de descenso), variómetro.	Indicateur de vitesse ascensionnelle (ou de descente).	Steiggeschwindigkeitsmesser (Fallgeschwindigkeitsmesser).	Indicatore della velocità di salita (o di discesa).
Instability.	instabilidad.	Instabilité.	Instabilität.	Instabilità.
Instrument flying.	vuelo a ciegas, pilotaje por medio de los instrumentos.	Vol par instrument (vol à vangle).	Blindflug.	Volo strumentale (volo cieco).
Isobar.	línea isobárica.	Isobare.	Isobar.	Isobara.
Lamp, signalling.	señal con linterna.	Lampe de signalisation.	Signallampe.	Lampada di segnalazione.
Land breeze.	brisa de tierra.	Brise de terre.	Landbrise.	Brezza di terra.
Landing area.	zona de aterrizaje.	Zone d'atterrissege.	Rollfeld.	Zona di atterraggio.
Landing field.	campo de aterrizaje.	Terrain d'atterrissege.	Landeplatz.	Campo di atterraggio.

**REFERENCE DATA, ADMINISTRATION**

Landing field, emergency.	campo de fortuna, campo para aterrizaje forzado.	Terrain de secours.	Notlandeplatz.
Landing flare, aircraft.	cobete de aterrizaje para aviones.	Feu d'atterrissege (dés-vion).	Landebahnfeuer.
Landing speed.	velocidad al aterrizar, velocidad de aterrizaje.	Vitesse d'atterrisage.	Landegeschwindigkeit.
Landplane.	avión de tierra, a terrestre.	Avion (terrestre).	Landflugzeug.
Leading edge.	borde de ataque, borde de entrada.	Bord d'attaque.	Flugelvorderkante.
Leakage.	fuga, fuga de líquido.	Fuite.	Leck.
Level, cross.	nivel transversal.	Niveau transversal.	Querlevelle.
Level, fore-and-aft.	nivel de proa a popa.	Niveau longitudinal.	Längslevelle.
Lever, altitude control.	corrector de altura.	correcteur d'altitude.	Höhengashebel.
Lever, throttle.	Palanca de gases.	Manette des gaz.	Gashebel.
Lift.	sustentación.	Force ascensionnelle.	Auftrieb.
Light, approach.	alumbrado luz de acercamiento, luz de aproximación.	Feu d'accès.	Anschwébelicht.
Light, boundary.	alumbrado de límites (líadero), luz de limitación.	Feu de délimitation.	Umrandungsfeuer.
Light, cockpit.	alumbrado de la cabina, a. del puesto de pilotaje.	Lampe de poste de pilotage.	Führersitzlampe.
Light, fixed.	luz fija.	Feu fixé.	Feu fixo.
Light, flashing.	luz intermitente, luz de eclipse.	Feu à éclat.	Feu à lampi.
Light, identification.	alumbrado de identificación, luz de identificación, luz identificadora.	Feu d'identification.	Zusatzfeuer.
Light, landing.	alumbrado de aterrizaje.	Feu d'atterrissege.	Landeleuchte.
Light, navigation.	luz de navegación.	Lampe de navigation.	Navigationsleuchte.
Load, factor.	coeficiente de carga.	Coefficient de charge.	Lastvielfach.
			Coefficiente di carico.
			Lampada di atterraggio.
			Lampade di navigazione.
			Coefficiente di carico.

**ARMY AIR FORCE FIELD MANUAL**

English	Spanish	French	German	Italian
Load, pay.	carga de pago.	Charge payante.	Nutzlast.	Carico utile pagante.
Load, useful.	carga útil, carga efectiva.	Charge utile.	Zuladung.	Carico utile.
Longeron.	languero.	Longeron.	Langholzn.	Lungherone.
Longitudinal.	longitudinal.	Longitudinal.	Langholzn.	Longitudinale.
Longitudinal axis.	eje longitudinal.	Axe longitudinal.	Längssache.	Asse longitudinale.
Longitudinal stability.	estabilidad longitudinal.	Stabilité longitudinale.	Längsstabilität.	Stabilità longitudinale.
Loop.	rizo invertido.	Looping.	Überschlag.	Gran volta.
	nubes bajas.	Looping à l'envers.	Umgekehrter Übereschlag.	Gran volta inversa.
Magnets.	magnetos (fem.).	Nubes bas.	Niedrigen Wolken.	Nubi bassi.
Main float.	flotador principal.	Flooteur principal.	Hauptschwimmer.	Accenditore a magnete.
Main plane.	plano principal.	Voiture.	Haupttragfläche.	Galleggiante Principale.
Main tank.	tanque principal.	Réservoir principal.	Hauptbehälter.	Cellula.
Marker, sea.	marcador marino.	Amer.	Seezeichen.	Serbatoio principale.
Maximum flying speed.	velocidad máxima de vuelo.	Vitesse maxima.	Höchstgeschwindigkeit.	Segnale marittimo.
Mechanic.	mecánico de aviación, mecánico motorista.	Mecanicien.	Mechaniker.	Velocità massima.
Mechanical starters.	iniciadores mecánicos, arranques mecánicos.	Démarrage automatique.	Mechanische Anlasser.	Ingegnere del campo di aviazione.
Minimum flying speed.	velocidad mínima de vuelo.	Vitesse minima.	Kleinste Geschwindigkeit.	Avviatore automatico.
Mist.	niebla, neblina, vapor.	Brume.	Bodennebel.	Velocità minima.
Monoplane.	monoplano.	Monoplan.	Eindecker.	Nebbia.
Monoplane, high wing.	Monoplano de alas elevada.	Monoplan à aile surélevée.	Hochdecker.	Monoplano.
Monoplane, low wing.	monoplano de alas bajas.	Monoplan à aile basse.	Tiefdecker.	Monoplano ad ala bassa.
Monoplane, mid wing.	monoplano de alas intermedias.	Monoplan à aile mi-basse.	Mitteldecker.	Monoplano ad ala simbassa.

**REFERENCE DATA, ADMINISTRATION**

Mooring cone.	cono de amarre.	Cône d'ancre.	Verankerungskegel.
Mooring guy.	amarre, a. de retención.	Câble d'ancre.	Verankerungstau.
Mooring rope.	cuerdas (soga, cable) de amarre.	Câble d'amarrage.	Hafteleine.
Nimbus.	nimbo.	Nimbus.	Nimbus.
Normal flight.	vuelo ordinario (normal).	Vol normal.	Normalflug.
Nose dive, terminal.	velocidad máxima de picado vertical, v. m., de descenso de cabeza.	Piqué limite.	Endsturzflug.
Paneking.	aterrizaje (atterrizamiento) brusco, desplome, aplastarse.	Descendre à plat. Plaquer.	Sacken.
Parachute.	paracaídas.	Parachute.	Fallschirm.
Parachute flare.	cohete de paracaídas.	Fusée éclairante à parachutage.	Fallschirmleuchtkugel.
Pedals. rudder.	pedales del timón.	Pédales du gouvernail	Seitenrudер Fusshebel.
Performance.	performance, potencia, fuerza motriz.	de direction.	Leistung.
Pilot.	piloto.	Pilote.	Flugzeugführer.
Pressure.	presión.	Pression.	Druck.
Propeller.	hélice, hélice aérea.	Hélice.	Luftschraube.
Propeller, controllable pitch.	hélice a paso variable, hélice regulable en vuelo.	Hélice à pales réglables.	Einstellluftschraube.
Propeller, variable pitch.	hélice regulable en tierra.	Hélice à pas variable.	Verstellluftschraube.
Pump, pressure.	bomba de presión.	Pompe foulante.	Druckpumpe.
R. p. m., maximum permissible.	máximo permisible de revoluciones por minuto.	Régime maximum permisible.	Höchstzulässige Drehzahl.
R. p. m., normal.	promedio normal de revoluciones por minuto.	Régime normal.	Normaldrehzahl.
Radiators.	radiadores.	Vitesse de rotation normale du moteur.	Normal.
		Radiatori.	Hühlern.

**ARMY AIR FORCE FIELD MANUAL**

English	Spanish	French	German	Italian
Radius of action.	radio de acción.	Rayon.	Flughorizont.	Raggio di azione.
Rain.	lluvia.	Pluie.	Regen.	Pioggia.
Range.	autonomía, estera de actividad.	Rayon d'action.	Autonomie.	Autonomia (kilometrica).
Report, weather.	boletín meteorológico, información meteorológica.	Avis météorologique (Météo).	Wetterbericht.	Informazioni meteorologiche.
Retractable radiator.	radiador replegable, r. eversible.	Radiateur escamotable.	Einziehbarer Kühler.	Radiatore mobile.
Retractable undercarriage.	tren de aterrizaje replegable.	Train d'atterrisseage escamotable.	Einziehbares Fahrgestell.	Carrello ritirabile.
Rib.	costilla.	Nervure.	Rippe.	Centina.
Rigging.	jarcía, a parejo.	Cordages.	Seilsystem.	Cordame.
Ring, exhaust.	anillo colector de escape.	Anneau d'échappement.	Auspuffring.	Anello di scappamento.
Rocket, signal.	sobete de señales.	Fusée de signalisation.	Signalfeuerpatrone.	Razzo di segnalazione.
Roll.	tonel, barrena horizontal.	Tonneau.	Überschlag über den Flügel.	Mulinello.
Rudder.	Timón, gobernante.	Gouvernail.	Seitenrudern.	Timone di direzione.
Rudder pedals.	pedales del timón.	Pedales du gouvernail de direction.	Pedali del timone di direzione.	Pedali del timone di direzione.
Run, landing.	recorrido de aterrizaje.	Roulement à l'atterris sage.	Auslauf.	Corsa di atterraggio.
Run, take-off	recorrido de despegue.	Roulement au décollage.	Anlauf.	Corsa di decollo.
Sandstorm.	tempedad de arena.	Tempête de sable.	Sandsturm.	Tempesta di sabbia.
Seaplane.	hidroavión, hidro.	Hydravion.	Wasserflugzeug.	Idrovolante.
Service load.	carga ordinaria, c. de servicio.	Charge utile.	Zuladung.	Carico utile.
Shutter radiator,	persiana de radiador.	Radiateur à volets.	Jalousiekühlen.	Radiatore a gelosia.
Skid, tail.	patín de cola,	Béquille.	(Schwanz) Sporn,	Pattino di coda.

**REFERENCE DATA, ADMINISTRATION**

Slipstream.	corriente de aire impulsado hacia atrás por la hélice.	Zone ablayée par l'hélice.	Schrambenstrahl.
Slots.	ramuras.	Fentes.	Fessuren.
Snap roll.	tonel rápido, barrena lanzada, nieve.	Tonneau rapide. Neige.	Schnelle Rolle. Schnee.
Snow.	envergadura.	Envergure.	Spannweite.
Span.	bujías de encendido, velocidad con relación al aire, velocidad efectiva.	Bougie (d'allumage). Vitesse absolue. Vitesse relative.	(Zünd) Kerze. Eigengeschwindigkeit. Absolute Geschwindigkeit (Grundgeschwindigkeit).
Spark plugs.			
Speed, air.			
Speed, ground.			
Spin.	barrena, picado muy pronunciado.	Vrille.	Trudeln.
	barrena plana.	Vrille à plat.	Flachtrudeln.
	barrena invertida.	Vrille à l'envers.	Umgekehrter Trudeln.
	Estabilizador.	Stabilisateur.	Höhenflosse.
	decalaje.	Décalage.	Staffelung.
	pérdida de sustentación, p. de velocidad.	Perte de vitesse.	Überzogener Flug.
	velocidad mínima sin pérdida de sustentación.	Vitesse critique.	Kritische Geschwindigkeit.
Stalling speed.			Velocità critica.
Starter, compressed-air.	arranque neumático, puesta en marcha de aire comprimido.	Démarrer à air comprimé.	Druckluftanlasser.
Starter, gas.	arranque accionado por gasolina, puesta en marcha accionada por gasolina.	Démarrer à gaz.	Gasanzünder.
Starter, hand.	puesta en marcha a mano, arranque de manivela.	Démarrer à main.	Handanzünder.
Starter, inertia.	arranque (puesta en marcha) de inercia.	Démarrer à volant.	Anlassermasse, Anlassschwingrad.

**ARMY AIR FORCE FIELD MANUAL**

English	Spanish	French	German	Italian
Stratosphere.	estratosfera.	Stratosphère.	Stratosphäre.	Stratosfera.
Streamline.	forma fuselada.	Carenier.	Stromlinie.	Carenatura.
Strut.	montante.	Montant.	Stiel, Strebe.	Asta.
Sump, crankcase.	colector de aceite del cárter.	Carter à huile.	Olsumpf.	Vasca d'olio.
Supercharged engine.	motor sobrealimentado.	Moteur suralimenté.	Überkompressionsmotor.	Motore sovraccaricato.
Supercharger.	sobrealimentador.	Surcompresseur.	Kompressor.	Compressore.
Supercharger, centrifugal.	sobrealimentador de acción centrífuga.	Turbocompresseur.	Kreisel oder Zentrifugal-kompressor.	Turbocompressore.
Supercharger, direct-drive.	sobrealimentador de accionamiento directo.	Compresseur à com-mande directe.	Direkt angetriebener Kompressor.	Compressore preliminare azionato direttamente.
Supercharger, exhaust-driven.	sobrealimentador accionado por el escape.	Compresseur à échape-ment.	Abgassturbinekompressor.	Compressore a scappamento.
Swell (sea).	marejada, oleada.	Houle.	Dünnung.	Moto ondoso.
Switch, ignition.	interruptor de encendido.	Interrupteur d'allumage.	Magnetschalter.	Interruttore di accensione.
Tachometer.	taquímetro.	Compte tours, Tachy-mètre.	Drehzahmmesser.	Contagiri; tachimetro.
Take-off.	despegue.	Décollage.	Start.	Decolloaggio.
Take-off run.	recorrido de despegue.	Roullement au décollage.	Anlauf.	Corsa di decollaggio.
Tanks.	tanques.	Réservoirs.	Behälter.	Serbatelli.
Taxying.	corrida; de corrida.	Roullement.	Rollen.	Rullare.
Torque.	momento de torsión, par de fuerzas.	Couple moteur.	Drehmoment.	Coppia del motore.
Track.	pista; rieles.	Trajectoire.	Bahn.	Traettoria.
Track angle.	ángulo de rastro.	Angle de route.	Kurswinkel.	Angolo di rotta.
Trade winds.	vientos alisios.	Vents alizés.	Passat.	Venti alisei.
Trailing edge.	borde de salida del ala.	Bord de fuite.	Hinterkante.	Bordo di uscita.

**REFERENCE DATA, ADMINISTRATION**

Tunnel, wind.	túnel aerodinámico.	Soufflerie.	Windkanal.
Turn indicator.	giroclinímetro, indicador de viraje.	Indicateur de virage.	Wendezeger.
Turret.	torrecilla, t. blindada.	Turm.	Turretta.
Unit, tail.	empenaje.	Leitwerk.	Impennaggio.
Valve.	válvula.	Ventil.	Valvola.
Visibility.	visibilidad.	Sicht.	Visibilità.
Warning.	alarma, aviso.	Warning.	Avviso.
Weather map.	carta meteorológica.	Avertissement	Synoptische Wetterkarte.
Weather report.	parte de tiempo	Carte synoptique.	Wettermeldung.
Weight, aerial.	plomada de antena.	Poids d'antenne.	Antennengewicht.
Wheel, tail.	rueda de cola.	Route de queue.	Schwanzzrad.
Wind, cone.	manga de viento, manga-valeta, cono de viento.	Manche à vent.	Windsack.
Wind tunnel.	túnel aerodinámico.	Sonnerie.	Galleria del vento.
Wireless.	radiocomunicación, teléfono) sin hilos.	T. S. F. (Télégraphie sans fil); Radiotélégraphie.	Radiotelegrafia.
Zooming.	empinada.	Montée en chandelle.	Salita in candella.

Wind tunnel.  
Turn indicator.

Turret.  
Unit, tail.  
Valve.  
Visibility.  
Warning.  
Weather map.  
Weather report.

Wind tunnel.  
Turn indicator.

Galleria del vento.  
Indicatore di virata.

Turretta.  
Impennaggio.  
Valvola.  
Visibilità.  
Avviso.  
Sintesi meteorologica.

Windkanal.  
Wendezeger.

Turm.  
Leitwerk.  
Ventil.  
Sicht.  
Warning.  
Synoptische Wetterkarte.

Soufflerie.  
Indicateur de virage.

Torrealla.  
Empennage.  
Soupape.  
Visibilité.  
Avertissement  
Carte synoptique.  
Avis météorologique.

Windkanal.  
Funkwesen.

Poids d'antenne.  
Route de queue.  
Manche à vent.

Wind tunnel.  
Radiotelegrafia.

Montée en chandelle.

## SECTION XII

### ARMY AIR FORCE LOADING AND EQUIPMENT TABLES

#### ARMY AIR FORCE REFERENCE DATA

#### ROAD-RAIL-WATER MOVEMENT

Unit vehicles loaded:

*Normal movement:*

#### GROUND UNITS OR GROUND ECHELON OF AIR UNITS

1		2		3		4		5		6		7		8		9		10		11		12		13		14		15	
		Personnel				Organization equipment																							
Unit																													
(Use T/O strength for personnel—flying and ground.)																													
Enlisted men																													
Officers and warrant officers																													
Headquarters squadron, air force combat command	63	336	389	1,458	75	23	59	438	23	1,280	23	1,280	23	1,280	23	1,280	23	1,280	23	1,280	23	1,280	23	1,280	23	1,280	23	1,280	
Total																													
Ship tons, 3.75 per man																													
Weight, loaded, long tons 2,240 pounds																													
Ship tons, 40 double fleet																													
Weight, long tons 2,240 pounds																													
Ship tons, 40 double fleet																													
Number																													
Vehicles																													
Equipment not carried in unit vehicles																													
Total ship tons, 10 and 10																													
1½-ton cargo trucks <sup>4</sup>																													
2½-ton cargo trucks <sup>4</sup>																													
3½-ton cargo trucks <sup>4</sup>																													
4-ton cargo trucks <sup>4</sup>																													

## REFERENCE DATA, ADMINISTRATION

**GROUND UNITS OR GROUND ECHELON OF AIR UNITS**

**ARMY AIR FORCE FIELD MANUAL**

1	Ship cargo requirements— ship tons	Rail requirements Cars—AR 30-935	Maintenance items														
			16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Unit (Use T/O strength for per- sonnel—flying and ground.)	Bowwave add 15 percent	Unit loaded add 20 percent	Combat unit loaded add 30 percent	Fulldam—1 officers/berth, 26 officers/car	Tourist—3 enlisted men/sec- tion, 28 enlisted men/sec-	Baggage—1 per 200 men	Gondola—46', 426 square feet	Flat—60', 454 square feet	Box—40', 3,040 cubic feet	Automobile—40', 3,268 cubic feet	Total	Gas <sup>4</sup> , Gallons, 10 gallons per vehicle	Oil <sup>4</sup> , Gallons, 1 quart per vehicle	Parts—14 cubic feet/ratlon per vehicle	Hold cargo	Deck cargo, in- hammable	Ship tons
	Stowage add 15 percent	Unit loaded add 20 percent	Combat unit loaded add 30 percent	Fulldam—1 officers/berth, 26 officers/car	Tourist—3 enlisted men/sec- tion, 28 enlisted men/sec-	Baggage—1 per 200 men	Gondola—46', 426 square feet	Flat—60', 454 square feet	Box—40', 3,040 cubic feet	Automobile—40', 3,268 cubic feet	Total	Gas <sup>4</sup> , Gallons, 10 gallons per vehicle	Oil <sup>4</sup> , Gallons, 1 quart per vehicle	Parts—14 cubic feet/ratlon per vehicle	Hold cargo	Deck cargo, in- hammable	Ship tons
Headquarters squadron, air force combat command	Headquarters squadron, air force	Headquarters bomber com- mand	Headquarters interceptor com- mand														

## REFERENCE DATA, ADMINISTRATION

**GROUND UNITS OR GROUND ECHelon OF AIR UNITS**

**ARMY AIR FORCE FIELD MANUAL**

Unit (Use T/O strength for per- sonnel—flying and ground.)	Ship cargo requirements— ship tons	Rail requirements												Maintenance items					
		16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	
Headquarters and headquar- ters squadron transport group	518.08	540.6	675.75																
Transport squadron	3,272.04	3,414.3	4,267.88																
Headquarters and headquar- ters squadron air depot group	1,327.96	1,385.7	1,732.13																
Repair squadron depot group	4,381.08	4,572.6	5,715.75																
Supply squadron depot group	1,919.93	2,003.4	2,504.25																
Stowage add 15 percent																			
Unit loaded add 20 percent																			
Pullman—1 officers/berth, 26 officers/car																			
Tourist—3 enlisted men/sec- tion, 29 enlisted men/car																			
Baggage—1 per 200 men																			
Gondola—46', 426 square feet																			
Flat—50', 464 square feet																			
Box—40', 3,040 cubic feet																			
Automobile—40', 3,269 cubic feet																			
Total																			
Cars—AR 30-935																			
Gas 5, Gallons, 10 gallons per vehicle																			
Oil 6, Gallons, 1 quart per vehicle																			
Tuberculosis, Pounds, $\frac{1}{2}$ Pound per vehicle																			
Rations—14 ounce rations per head																			
Deek cargo, miles/m-																			
Ship tons																			

## REFERENCE DATA, ADMINISTRATION

### NOTES

- <sup>1</sup> All unit cargo vehicles loaded with organization equipment. Gasoline, oil, and water servicing vehicles empty.
- <sup>2</sup> Normal movement—Ground echelon precedes air echelon to destination.
- <sup>3</sup> Unit vehicles loaded to authorized capacity.
- <sup>4</sup> Show total requirements in each column. Only one size truck will normally be required.
- <sup>5</sup> Inflammables—Include as deck cargo.
- <sup>6</sup> Pullman or tourist.
- <sup>7</sup> One additional needed for feeding, traveling over 48 hours.

ARMY AIR FORCE REFERENCE DATA

AIR-GROUND-WATER MOVEMENT

*Normal movement<sup>1</sup>*

AIR ECHELON

ARMY AIR FORCE FIELD MANUAL

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	Organization equipment						Remarks
																			Carried in transport aircraft			Carried in transport aircraft			
Unit (Use T/O strength for personnel Flying and Ground.)	Officers and Warrant Officers			Enlisted men			Officers			Enlisted men			Officers			Enlisted men			Officers			Enlisted men			
	Total	Officers	Enlisted men	Total	Officers	Enlisted men	Total	Officers	Enlisted men	Total	Officers	Enlisted men	Total	Officers	Enlisted men	Total	Officers	Enlisted men	Total	Officers	Enlisted men	Total	Officers	Enlisted men	No. of model transistor Biplanes required
Headquarters squadron air force combat command	71	380	451	18	44	62	18	44	62	-----	9, 934	588	9, 934	588	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Headquarters squadron air force command	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Headquarters squadron intercep- tor command	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Headquarters squadron support command	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Headquarters squadron air wing	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Headquarters squadron bomb group (H)	24	287	281	9	16	24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3 airplanes.

**REFERENCE DATA, ADMINISTRATION**

Headquarters squadron bomb group (M)	26	273	299	17	18	35	0	0	0	0	3,375	175	675	37.9	5 airplanes.
Headquarters squadron bomb group (L)	21	261	282	6	10	15	0	0	0	0	3,345	0	0	0	0 airplanes.
Headquarters squadron pursuit (I)	47	250	297	5	0	5	14	3	17	2	1,257	106	0	1,257	106 airplanes.
Headquarters squadron pursuit (F)	38	237	275	27	37	64	0	0	0	0	0	0	0	0	0 airplanes.
Bomb squadron (H)	52	254	306	42	48	90	0	0	0	0	8,504	493	576	37.9	13 airplanes.
Bomb squadron (M)	26	219	245	17	22	39	0	0	0	0	8,677	0	0	0	0 airplanes.
Bomb squadron (L)	42	218	260	25	0	25	23	13	36	4	4,136	286	0	4,136	286 airplanes.
Pursuit squadron (F)	44	271	315	32	40	72	0	0	0	0	6,486	365	6,486	365	25 airplanes.
Pursuit squadron (I)	61	276	337	52	39	91	0	0	0	0	4,524	344	348	214	0 airplanes.
Reconnaissance squadron (H)	44	271	315	32	40	72	0	0	0	0	6,486	365	6,486	365	0 airplanes.
Reconnaissance squadron (M)	61	276	337	52	39	91	0	0	0	0	4,524	344	348	214	0 airplanes.
Headquarters squadron air base group	55	241	279	26	13	39	0	0	0	0	8,675	32	8,675	32	0 airplanes.
Air base squadron	55	241	279	26	13	39	0	0	0	0	8,675	32	8,675	32	0 airplanes.
Matiel squadron	55	241	279	26	13	39	0	0	0	0	8,675	32	8,675	32	0 airplanes.
Reconnaissance squadron (L)	38	241	279	26	13	39	0	0	0	0	8,675	32	8,675	32	0 airplanes.
Headquarters and headquarters squadron transportation wing	9	64	73	3	3	6	4	38	42	3	0	0	0	0	0 airplanes.
Headquarters and headquarters squadron transportation group	10	109	119	3	3	6	5	86	91	7	0	0	0	0	0 airplanes.
Transport Squadron	41	188	229	39	143	182	0	0	0	0	0	0	0	0	0 airplanes.
Headquarters and headquarters squadron air depot group	16	167	183	10	8	18	4	136	140	10	0	0	0	0	0 airplanes.
Repair squadron depot group	10	189	199	0	0	0	0	8	161	169	12	0	0	0	0 airplanes.
Supply squadron depot group	10	132	142	0	0	0	0	8	104	112	8	0	0	0	0 airplanes.

<sup>1</sup> Normal movement—Ground echelon precedes air echelon to destination.

**ARMY AIR FORCE REFERENCE DATA  
ROAD-RAIL-WATER MOVEMENT**

Unit vehicles loaded 1

### Normal movement:

## **GROUND UNITS OR GROUND ECHELON OF AIR UNITS**

**REFERENCE DATA, ADMINISTRATION**

Company headquarters.....	3	22	25	93.75	3	17.4	24.7	9	19.5	137.95	0	4	1	0
Depot platoons.....	6	85	91	341.25	11	29.4	137.1	23.80	60	538.35	0	10	1	2
Refilling point platoons.....	4	59	63	236.25	12	23.1	187.8	8.3	18.3	442.35	1	3	1	1
Distributing point platoons.....	0	100	100	375	0	0	0	36	78	453	1	14	1	5

## **GROUND UNITS OR GROUND ECHELON OF AIR UNITS**

# ARMY AIR FORCE FIELD MANUAL

**REFERENCE DATA, ADMINISTRATION**

Depot platoons-----	619.10	646.02	807.53	0	4	(2)1	0	4	1	0	10	110	2	75	5½	.646	.646	.902
Refilling point platoons-----	568.70	530.82	663.52	0	3	(4)1	0	4	1	0	9	120	3	6	.447	.447	.447	.984
Distributing point platoons-----	520.95	543.6	679.5	0	4	(4)1	0	0	1	0	6	0	0	0	.76	.76	0	

NOTES

<sup>1</sup> All unit cargo vehicles loaded with organization equipment. Gasoline, oil, and water servicing vehicles empty.

<sup>2</sup> Normal movement—Ground echelon precedes air echelon to destination.

<sup>3</sup> Unit vehicles loaded to authorized capacity.

<sup>4</sup> Show total requirements in each column. Only one size truck will normally be required.

<sup>i</sup> Inflammables—Include as deck cargo.

## ESTIMATED

ARMY AIR FORCE REFERENCE DATA  
ROAD-RAIL-WATER MOVEMENT

Unit vehicles empty

Normal movement 1

## GROUND UNITS OR GROUND ECHELON OF AIR UNITS

Unit	Officers and warrant officers and warrenants	Enlisted men	Total	Ship tons, max	Ship tons, 3.75 per man	Number	Weight empty, long tons, 2,240 pounds	Ship tons, 40 cubic feet	Ship tons, excluding vehicles	Organization equipment	Personnel	Ship cargo requirements—ship tons				Combat unit load add 50 percent
												Vehicles	Equipment	Storage add 15 percent	Unit loaded add 20 percent	
1	1	1	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Quartermaster company, troop (T.M.)																
Company headquarters	1	22	23	86.25	9	20.43	160.2	63.03	71.2	317.65	365.29	381.18	476.47			
Platoon	1	44	45	168.75	46	195.83	929.1	109.22	309.7	1,407.55	1,618.68	1,689.06	2,111.33			
Quartermaster company (Q.M.)	1	24	25	93.75	8	16.70	126.1	12.5	42	261.85	301.12	314.22	392.77			
Company headquarters	1	25	26	97.50	17	38.15	321.1	28.6	107	525.6	604.44	630.72	788.4			
Supply platoon																

## REFERENCE DATA, ADMINISTRATION

Light maintenance platoon.....	1	68	69	258.75	18	44.70	283.2	26.9	94.4	636.35	731.80	763.62	954.53
Quartermaster company aviation supply.....	3	22	25	93.75	3	3.87	24.7	9	19.5	137.95	158.64	165.54	206.92
Company headquarters.....	6	85	91	341.25	11	22.11	137.1	32.76	71	549.35	631.75	659.22	824.03
Depot platoon.....	4	59	63	236.25	12	23.84	187.8	23	49	473.06	644	567.66	709.57
Refilling point platoon.....	0	100	100	375	0	0	0	36	78	453	520.95	543.6	678.6
Distributing point platoon.....													

## GROUND UNITS OR GROUND ECHELON OF AIR UNITS

## ARMY AIR FORCE FIELD MANUAL

Unit	Cars—A.R. 30-935	Rail requirements										Maintenance items							
		15	16	17	18	19	20	21	22	23	24	25	26	27	28	Deck cargo, in. dimensions	Ship tons	Hold cargo feet/cubic foot	Cubic feet/vehicle
Fullman—1	Officer/ Berth, 26 officers/ car	0	1	(1/8)1	0	11	0	0	13	90	2.25	4½	0.177	0.177	0.85				
Tourist—3	Enlisted men/section, 29 en- listed men/section/car	0	2	(1/4)1	0	22	0	0	25	460	11.5	23	.354	.354	3.124				
Gondola—46'	Bags—1 per 200 men																		
Hat—50'	Box—40', 3.040 cubic feet																		
Automobile—40'	Total																		
Gas <sup>2</sup> , gallons, 10 gal- lons per vehicle	Gas <sup>2</sup> , gallons, 10 gal- lons per vehicle																		
Oil <sup>2</sup> , gallons, 1 quart per vehicle	Oil <sup>2</sup> , gallons, 1 quart per vehicle																		
Lubricant <sup>2</sup> , pounds, 1/8 pound per ve- hicle	Lubricant <sup>2</sup> , pounds, 1/8 pound per ve- hicle																		
Halitions—14 cubic feet/section	Halitions—14 cubic feet/section																		
Deck cargo, in.	Deck cargo, in.																		

## Quartermaster company, troop (Trk)

Company headquarters	0	1	(1/8)1	0	4	0	0	6	80	2.00	4	.197	.197	.70				
Platoon	0	2	(1/4)1	0	22	0	0	0	11	170	4.25	8½	.218	.218	1.39			
Quartermaster company (LM)	0	1	(1/8)1	0	9	0	0	0	11	130	3.25	6½	.534	.534	1.06			
Company headquarters	0	1	(1/8)1	0	7	0	0	0	11	130	3.25	6½	.534	.534	1.06			
Supply platoon	0	3	1	0	0	0	0	0	0	0	0	0	0	0				
Light maintenance platoon	0	0	1	0	0	0	0	0	0	0	0	0	0	0				
Quartermaster company aviation supply	0	1	1	0	4	0	0	0	0	0	0	0	0	0				
Company headquarters																		

**REFERENCE DATA, ADMINISTRATION**

Depot platoon .....	0	3	1	0	6	0	0	10	110	2.75	5½	.646	.902
Refilling point platoon .....	0	3	1	0	6	0	0	10	120	3	6	.447	.984
Distributing point platoon .....	0	4	1	0	0	2	0	7	0	0	0	.76	0

NOTES

- 1 Normal movement—Ground echelon precedes air echelon to destination.
- 2 Inflammables—Include as deck cargo.

## ARMY AIR FORCE REFERENCE DATA

ROAD-RAIL-WATER MOVEMENT

Unit vehicles loaded:

Normal moment 2

## GROUND UNITS OR GROUND ECHELON OF AIR UNITS

**REFERENCE DATA, ADMINISTRATION**

Ordnance company, aviation (bombardment), authorized	6	117	122	457.50	88	204	1,339	.25	1,251,797.76
Airdrome platoon, ordnance company, aviation (bombardment), T/O	1	41	42	157.50	21	49	307	.06	.25
Ordnance company, aviation (pursuit), T/O	5	83	88	330	16	33	270	.23	1.24
Ordnance company, aviation (pursuit), authorized	2	38	40	150	16	33	270	.23	1.24
Airdrome platoon, ordnance company, aviation (pursuit), T/O	1	23	24	90	4	8	53	.06	.31
Airdrome platoon, ordnance company, aviation (pursuit), authorized	1	9	10	37.50	4	8	53	.06	.31
Airdrome platoon, ordnance company, aviation (bombardment), authorized	1	26	27	101.25	21	49	307	.06	.25

**GROUND UNITS OR GROUND ECHELON OF AIR UNITS**

**ARMY AIR FORCE FIELD MANUAL**

1	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	
Ship cargo requirements— ship tons		Rail requirements Cars—A.R. 30-935													Maintenance items			
		1 day																
Unit	Stowage add 15 percent	Combat unit loaded add 50 percent	Berths	1,002.10	1,045.67	1,307.09	2	1	18	—	—	22	290	7.25	14.50	9.10	0.72	
Ordnance company, aviation (air base), T/O	Ordnance company, aviation (air base), authorized	Ordnance company, aviation (bombardment), T/O	Ordnance company, aviation (bombardment), authorized	877.04	915.17	1,144	2	2	1	18	—	—	21	290	7.25	14.50	4.90	.72
				2,347.7	2,449.8	3,062.2	6	6	1	29	—	—	36	880	22	44	26.18	1.65
				2,067.42	2,157.31	2,896.64	6	4	1	29	—	—	34	880	22	44	17.08	1.65

**REFERENCE DATA, ADMINISTRATION**

Airdrome platoon, ordnance company, aviation (bombardment), T/O	534.46	657.7	697.13	1	2	1	7	10	210	5.25	10.5	5.88	.37
Ordnance company, aviation (pursuit), T/O	690.26	720.27	900.35	5	3	1	7	11	160	4	8	12.32	.66
Ordnance company, aviation (pursuit), authorized	484.43	505.49	631.86	2	2	1	7	10	160	4	8	5.60	.55
Airdrome platoon, ordnance company, aviation (pursuit), T/O	164.81	171.97	214.97	1	1	1	2	4	40	1	2	3.38	.14
Airdrome platoon, ordnance company, aviation (pursuit), authorized	52.68	54.97	68.72	1	1	1	2	3	40	1	2	1.40	.14
Airdrome platoon, ordnance company, aviation (bombardment), authorized	469.78	490.2	612.75	1	1	1	7	9	210	6.25	10.5	8.78	.37

**NOTES**

<sup>1</sup> All unit cargo vehicles loaded with organization equipment. Gasoline, oil, and water servicing vehicles empty.

<sup>2</sup> Normal movement—Ground echelon precedes air echelon to destination.

<sup>3</sup> Unit vehicles loaded to authorized capacity.

<sup>4</sup> Show total requirements in each column. Only one size truck will normally be required.

<sup>5</sup> Inflammables—Include as deck cargo.

ARMY AIR FORCE REFERENCE DATA  
ROAD-RAIL-WATER MOVEMENT

Unit vehicles empty

*Normal movement!*

GROUND UNITS OR GROUND ECHELON OF AIR UNITS

Unit	Officers and warrant officers or sergeants	Enlisted men	Ship tons, 3.75 per man	Total	Weight empty, long tons, 2,240 pounds	Ship tons, 40 cubic feet	Vehicles	Equipment—excluding vehicles	Total ship tons, 2,240 pounds	Ship tons, 40 cubic feet, excluding cargo	Stowage and 15 percent	Unit loaded add 20 percent	Combat unit loaded add 50 percent	1      2      3      4      5      6      7      8      9      10      11      12      13      14													
														1	2	3	4	5	6	7	8	9	10	11	12	13	14
Ordnance company, aviation (air base), T/O	5	60	65	243.75	29	104	630	4.85	11.27	885.02	1,017.77	1,062.02	1,021,327.53														
Ordnance company, aviation (air base), authorized	2	33	35	131.25	29	104	630	4.30	10.93	772.18	888	926.62	1,153.27														
Ordnance company, aviation (bombardment), T/O	6	181	187	701.25	88	198	1,339	6.76	7.96	2,048.21	2,355.44	2,455.85	3,072.32														
Ordnance company, aviation (bombardment), authorized	5	117	122	457.5	88	198	1,339	5.59	7.23	1,803.73	2,074.29	2,164.48	2,705.6														

**REFERENCE DATA, ADMINISTRATION**

Airdrome platoon ordnance company, aviation (bombardment) T/O	1	41	42	157.5	21	47	307	1.75	2.37	488.87	536.9	560.24	700.3
Ordnance company, aviation (pursuit), T/O	5	83	88	330	16	30	270	2.63	2.01	602.01	692.31	722.41	903
Ordnance company, aviation (pursuit), authorized	2	38	40	150	16	30	270	1.97	2.01	422.01	485.31	508.41	633.01
Airdrome platoon, ordnance company, aviation (pursuit), T/O	1	23	24	90	4	7	53	.32	.98	143.98	165.68	172.78	215.97
Airdrome platoon ordnance company, aviation (pursuit), authorized	1	9	10	37.5	4	7	53	.30	.87	91.37	105	109.64	137.05
Airdrome platoon, ordnance company, aviation bombardment, authorized	1	26	27	101.25	21	47	307	1.68	2.09	410.34	471.89	492.41	615.51

**GROUND UNITS OR GROUND ECHELON OF AIR UNITS**

**ARMY AIR FORCE FIELD MANUAL**

Unit	Cars—AR 30-336	Rail requirements										Maintenance items					
		15	16	17	18	19	20	21	22	23	24	25	26	27	28	1 day	1 day
Pullman—1 officer/ear	Berths	5	2	1	18												
Tourist—3 enlisted men section, 29 en-		2	2	1	18												
Hired men section, 29 en-		6	6	1	29												
Tourist—3 enlisted men/car		5	4	1	29												
Hired men section, 29 en-		6	6	1	29												
Gasoline—46', 426 square feet	Gondola—46', 426 square feet																
Box—40', 3,040 cubic feet	Flat—50', 454 square feet																
Automobile—40', 3,269 cubic feet	Total																
Gas, 3 gallons, 10 gal-	Gas, 3 gallons, 10 gal-																
Oil, 2 gallons, 1 quart	Gas, 3 gallons, 10 gal-																
Lubricant, 1 quart	Lubricant, 1 quart																
Vehicle per vehicle	Vehicle per vehicle																
Gasoline, 1 quart	Rations—14 cubic feet/ration																
Deck cargo, in-	Deck cargo, in-																
Ship tons	Ship tons																

Ordnance company, aviation (air base), T/O—  
 Ordnance company, aviation (air base), au-  
 thorized  
 Ordnance company, aviation (bombardment),  
 T/O  
 Ordnance company, aviation (bombardment),  
 authorized  
 Airdrome platoon ordnance company, aviation  
 (bombardment) T/O  
 Ordnance company, aviation (pursuit), T/O—  
 Ordnance company, aviation (pursuit), au-  
 thorized

**REFERENCE DATA, ADMINISTRATION**

Airdrome platoon, ordnance company, aviation (pursuit), T/O.	1	1	1	2	4	40	1	2	3.36	.....	.14
Airdrome platoon, ordnance company, aviation (pursuit), authorized	1	1	1	2	3	40	1	2	1.40	.....	.14
Airdrome platoon, ordnance company, aviation (bombardment), authorized	1	1	1	7	9	210	5.25	10.5	3.78	.....	.37

NOTES

<sup>1</sup> Normal movement—Ground echelon precedes air echelon to destination.

<sup>2</sup> Inflammables—Include as deck cargo.

**ARMY AIR FORCE REFERENCE DATA  
ROAD-RAIL-WATER MOVEMENT**

## Unit vehicles loaded 1

Normal movement?

## **GROUND UNITS OR GROUND ECHELON OF AIR UNITS**

**REFERENCE DATA, ADMINISTRATION**

Signal company, operation aircraft warning	8	281	289	1,083.75	49	180	1,223	0	0	0	0
Signal company, maintenance aviation	11	283	294	1,102.5	81	281	1,910	0	0	0	0
Signal platoon, maintenance aviation	2	60	62	232.5	16	58	409	0	0	0	0
Signal platoon, air base	1	36	37	138.75	6	20	126	0	0	0	0

GROUND UNITS OR GROUNDBLOCK OF AIR UNITS

## ARMY AIR FORCE FIELD MANUAL

1	Ship cargo requirements— ship tons	Unit	Stowage add 15 percent	Unit loaded add 20 percent	Combat unit loaded add 50 percent	Pullman—1 officer/berth, 26 officers/berth, 26 Tourist—3 enlisted men/sec- tion, 29 enlisted men/car- bon, 29 enlisted men/car- bon	Baggage—1 per 200 men	Gondola—46', 126 square feet	Flat—50', 454 square feet	Box—40', 8,040 cubic feet	Automobile—40', 3,269 en- tire fleet	Total	Gas 6', gallons, 10 gallons per vehicle	Oil 4', gallons, 1 quart per vehicle	Lubricant 6' pounds, $\frac{1}{2}$ pound per vehicle	Hazardous—14 double fleet/re- tention	Deck cargo, im- magine-	Ship tons	Maintenance items	1 day			
16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39

**REFERENCE DATA, ADMINISTRATION**

Signal company, maintenance aviation	3,464.38	3,615	4,518.75	0	10	2	0	30	-0	0	42	810	20.25	40.5	41.2	1.0	4.5
Signal platoon, maintenance aviation	737.73	769.8	962.25	0	2	1	0	7	0	0	10	160	4	8	8.7	0.2	0.9
Signal platoon, air base	304.46	317.7	397.13	0	2	1	0	3	0	0	6	60	1.5	3	5.2	0.1	0.4

**NOTES**

<sup>1</sup> All unit cargo vehicles loaded with organization equipment. Gasoline, oil, and water servicing vehicles empty.

<sup>2</sup> Normal movement—Ground echelon precedes air echelon to destination.

<sup>3</sup> Unit vehicles loaded to authorized capacity.

<sup>4</sup> Show total requirements in each column. Only one size truck will normally be required.

<sup>5</sup> Inflammables—Include as deck cargo.

ARMY AIR FORCE REFERENCE DATA

ROAD-RAIL-WATER MOVEMENT

Unit vehicles empty

*Normal movement<sup>1</sup>*

GROUND UNITS OR GROUND ECHELON OF AIR UNITS

Unit	Officers and warrant men	Enlisted men	Total	Ship tons, 3.75 per man	Number	Weight empty, long tons, 2,240 pounds, each	Ship tons, 40 each	Ship equipment feet of deck 2,240 pounds, each	Weight empty, long tons, 2,240 pounds, each	Equipment excluding vehicles	Organization equipment	Personnel	1      2      3      4      5      6      7      8      9      10      11      12      13      14													
													1	2	3	4	5	6	7	8	9	10	11	12	13	14
Signal company, aviation	6	136	142	532.6	30	58	557	29	79	1,168.5	1,343.78	1,402.2	1,762.75													
Signal company, air wing	3	79	82	307.5	25	45	448	24	72	827.6	951.63	993	1,241.25													
Signal company, depot	5	127	132	495	7	14	132	6	17	644	740.6	772.8	966													
Signal company, aircraft warning	12	357	369	1,383.75	35	79	774	36	111	2,268.75	2,609.06	2,722.5	3,403.13													
Signal company, operation, aircraft warning	8	281	289	1,083.75	49	126	1,223	54	184	2,490.75	2,864.36	2,988.9	3,736.12													
Signal company, maintenance aviation	11	283	294	1,102.5	81	201	1,910	80	278	3,290.5	3,784.08	3,948.6	6,935.75													
Signal platoon, maintenance aviation	2	60	62	232.5	16	44	409	14	61	702.5	807.88	843	1,053.75													
Signal platoon, air base	1	36	37	138.75	6	12	126	8	21	285.75	328.61	342.9	428.62													

## GROUND UNITS OR GROUND ECHELON OF AIR UNITS

## REFERENCE DATA, ADMINISTRATION

Unit	Rail requirements										Maintenance items						
	16	16	17	18	19	20	21	22	23	24	25	26	27	28			
Cars—AR 30-935																	
1 day																	
Gasoline, 10 gallons, 10 gas- oline, 2 gallons, 1 quart Oil, 2 gallons, 1 quart Lubricants, pounds, $\frac{1}{2}$ pound per ve- hicle Habitions—, 14 cubic feet/ratior Deck cargo, in- flammables																	
Ship tons																	

## Notes

<sup>1</sup> Normal movement—Ground echelon precedes air echelon to destination.

<sup>2</sup> Inflammables—Include as deck cargo.

ARMY AIR FORCE REFERENCE DATA  
ROAD-RAIL-WATER MOVEMENT

Unit vehicles loaded.<sup>1</sup>

*Normal movement<sup>2</sup>*

GROUND UNITS OR GROUND ECHELON OF AIR UNITS

Unit	Officers and warrant officers	Enlisted men	Totals	Ship tons, 3.75 per man	Weight <sup>3</sup> , loaded, long tons 2,240 pounds	Ship tons, 40 cubic feet, 40	Ship tons 40 cubic fleet	Weight long tons 2,240 pounds	Ship tons, 40	Equipment not carried in unit vehicles	Total ship tons, columns 8, and 10	Road movement					
												2	3	4	5	6	7
Headquarters chemical company, service (avn.).	2	7	7	7.50	26.25	---	---	0.5	1	34.75	1						
Headquarters chemical platoon, chemical company, service (avn.).	1	4	4	3.75	3.75	1	1.8	16.0	5	18.75	1						

**REFERENCE DATA, ADMINISTRATION**

1-squad section chemical platoon 6	24	24	90.00	5	13.5	119.4	.23	.5	209.9
Supply section, air force	2	24	7.50	2	6.6	65.2		162.7	
Decontamination detachment 7		26	90.00	1					
		4	97.50						
			16.60						
			4						

**GROUND UNITS OR GROUND ECHELON OF AIR UNITS**

**ARMY AIR FORCE FIELD MANUAL**

1	16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32	Ship cargo requirements— ship tons	Rail requirements												Maintenance items												
			Cars—AFR 30-935												1 day												
Headquarters chemical company, service (avn.)	39.96	41.7	\$2.13	2/26	7/20	9/20	....	....	....	....	....	....	....	....	Hold cargo	Deck cargo, inables	Ship tons	1.26	.7	.5	.5	.5	.5	.5	.5	.5	.1
Headquarters chemical platoon, chemical company, service (avn.)	39.96	41.7	52.13	1/26	4/20	5/20	....	....	....	....	....	....	....	....	Automobile—40', 3,269 cubic feet	Deck cargo, inables	Ship tons	1.26	.7	.5	.5	.5	.5	.5	.5	.5	.1
1-squad section chemical platoon	241.39	261.88	314.85	2/26	24/20	26/20	....	....	....	....	....	....	....	....	Box—40', 3,040 cubic feet	Total	Ship tons	1.26	.7	.5	.5	.5	.5	.5	.5	.5	.1
Supply section, air force	187.11	186.24	244.05	2/26	26/20	42/20	....	....	....	....	....	....	....	....	Fleet—50', 454 square feet	Gas, gallons, 10 gallons per vehicle	Ship tons	1.26	.7	.5	.5	.5	.5	.5	.5	.5	.1
Decontamination detachment	77.86	81.24	101.55	1/26	4/20	42/20	....	....	....	....	....	....	....	....	Oil, gallons, 1 quart per vehicle	Tubricant <sup>4</sup> , pounds, $\frac{1}{2}$ pound per vehicle	Ship tons	1.26	.7	.5	.5	.5	.5	.5	.5	.5	.1
Unit loaded add 20 percent															Gasoline—1 quart per vehicle	Rations—14 cubic feet/ration	Ship tons	1.26	.7	.5	.5	.5	.5	.5	.5	.5	.1
Stowage add 15 percent															Oil, gallons, 1 quart per vehicle	Hold cargo	Ship tons	1.26	.7	.5	.5	.5	.5	.5	.5	.5	.1
Combat unit loaded add 50 percent															Automobile—40', 3,269 cubic feet	Total	Ship tons	1.26	.7	.5	.5	.5	.5	.5	.5	.5	.1
Fulham—1 officer/berth, 26 officers—3 enlisted men/sec-tion, 29 enlisted men/car															Gasoline—46', 426 square feet	Gas, gallons, 10 gallons per vehicle	Ship tons	1.26	.7	.5	.5	.5	.5	.5	.5	.5	.1
Baggage—1 per 200 men															Box—40', 3,040 cubic feet	Total	Ship tons	1.26	.7	.5	.5	.5	.5	.5	.5	.5	.1
Tourist—3 enlisted men/sec-tion, 29 enlisted men/car															Fleet—50', 454 square feet	Gasoline—46', 426 square feet	Ship tons	1.26	.7	.5	.5	.5	.5	.5	.5	.5	.1
Gondola—46', 426 square feet															Automobile—40', 3,269 cubic feet	Total	Ship tons	1.26	.7	.5	.5	.5	.5	.5	.5	.5	.1
Flat—50', 454 square feet															Gasoline—46', 426 square feet	Gasoline—1 quart per vehicle	Ship tons	1.26	.7	.5	.5	.5	.5	.5	.5	.5	.1
Box—40', 3,040 cubic feet															Automobile—40', 3,269 cubic feet	Total	Ship tons	1.26	.7	.5	.5	.5	.5	.5	.5	.5	.1
Automobile—40', 3,269 cubic feet															Gasoline—1 quart per vehicle	Hold cargo	Ship tons	1.26	.7	.5	.5	.5	.5	.5	.5	.5	.1
Total															Automobile—40', 3,269 cubic feet	Total	Ship tons	1.26	.7	.5	.5	.5	.5	.5	.5	.5	.1

## REFERENCE DATA, ADMINISTRATION

### NOTES

- 1 All unit cargo vehicles loaded with organization equipment. Gasoline, oil, and water servicing vehicles empty.
- 2 Normal movement—Ground echelon precedes air echelon to destination.
- 3 Unit vehicles loaded to authorized capacity.
- 4 Show total requirements in each column. Only one size truck will normally be required.
- 5 Inflammables—Include as deck cargo.
- 6 Normally 4-squad section per chemical platoon.
- 7 Normally five decontamination detachments per matériel squadron.

**ARMY AIR FORCE REFERENCE DATA**  
**ROAD-RAIL-WATER MOVEMENT**

Unit vehicles empty

*Normal movement*<sup>1</sup>

**GROUND UNITS OR GROUND ECHELON OF AIR UNITS**

Unit	Personnel	Organization equipment										Ship cargo requirements— ship tons			
		Vehicles	Equipment excluding vehicles	Ship tons, 40 cubic feet tens, 2,240 pounds	Ship tons, 40 cubic feet tens, 2,240 pounds	Total weight empty, long tons, 2,240 pounds	Weight empty, long tons, 2,240 pounds	Weight empty, long tons, 2,240 pounds	Stowage add 15 per- cent	Unit loaded add 20 percent	Combat unit loaded add 50 percent	11	12	13	14
Headquarters, chemical company, service (aviation).	Officers and warrant officers Enlisted men	2 7 9 33.75 3.75 15.00 18.75 5 24	7.5 26.25 None ----- ----- 1.8 16.5 ----- 10.8 90.00	----- ----- ----- ----- ----- 1 4 5 24	----- ----- ----- ----- ----- 1 4 5 24	----- ----- ----- ----- ----- 1 4 5 24	----- ----- ----- ----- ----- 1 4 5 24	----- ----- ----- ----- ----- 1 4 5 24	33.75 35.25 35.25 35.25 35.25 40.63 42.3 52.87 .25 .25 .25 .25	38.81 40.63 42.3 52.87 240.81 251.28 314.1	40.5 50.5 52.3 52.87 251.28 314.1	40.5 50.5 52.3 52.87 251.28 314.1			
Headquarters, chemical platoon, chemical company service (aviation).	1-squadron section, chemical platoon <sup>2</sup>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

REFERENCE DATA, ADMINISTRATION

Supply section, air force	2	24	24	7.50	2	6.8	6.8	162.7	187.1	195.24	244.05
Decontamination detachment 4	4	4	4	90.00	26	97.50	65.2	65.2	67.7	77.85	81.24

**GROUND UNITS OR GROUND ECHELON OF AIR UNITS**

**ARMY AIR FORCE FIELD MANUAL**

Unit	Cars—AR 30-935	Rail requirements										Maintenance items					
		15	16	17	18	19	20	21	22	23	24	25	26	27	28		
Pullman—1 officer/ car																	
Tourist—3 enlisted men section, 29 en.																	
Baggage—1 per 200 men square feet																	
Gondola—46', 426 square feet																	
Flat—50', 454 square feet																	
Box—40', 3,040 cubic feet																	
Automobile—40', 3,269 cubic feet																	
Total																	
Gas, gallons, 10 gal. lions per vehicle																	
Oil, gallons, 1 quart per vehicle																	
Lubricants, pounds, hicle																	
Rations—14 cubic feet/ration																	
Held cargo, in. dimensions, in.																	
Ship tons																	

## REFERENCE DATA, ADMINISTRATION

### NOTES

- <sup>1</sup> Normal movement—Ground echelon precedes air echelon to destination.
- <sup>2</sup> Inflammable—Include as deck cargo.
- <sup>3</sup> Normally 4 squadron sections per chemical platoon.
- <sup>4</sup> Normally 5 decontamination detachments per materiel squadron.

APMVA 1118 EOBCE PREFERENCE DATA

ROAD-RAIL-WATER MOVEMENT

Unit vehicles loaded:

Normal movement

## **GROUND UNITS OF ECHELON OF AIR UNITS**

**REFERENCE DATA, ADMINISTRATION**

Squadron	1	8	9	33.75	2	4.26	32					
Aviation medical supply platoon	2	19	21	78.75	74	8.59	63.55					
Group headquarters and headquarters squadron plus 1 squadron <sup>6</sup>	3	24	27	101.25	4	8.85	64					
								65.75				
									142.30			
										165.25		

**GROUND UNITS OR GROUND ECHELON OF AIR UNITS**

**ARMY AIR FORCE FIELD MANUAL**

1	Ship cargo requirements— ship tons	Unit	Rail requirements												Maintenance items					
			Cars—A.R. 30-935												1 day					
															Held cargo		Ship tons			
															Deck cargo, in deck—		Craft.		Craft.	
															Lubricants, pounds, $\frac{1}{4}$ pound per vehicle		1.26		1.26	2
															Oils, gallons, 1 quart per vehicle					
															Gas, gallons, 10 gallons per vehicle					
															Total		Gal.	Qts.	Lb.	
															Box—40', 3,040 cubic feet					
															Flat—60', 464 square feet					
															Gondola—48', 426 square feet					
															Baggage—1 per 200 men					
															Tourist—3 enlisted men/car					
															Pullman—1 officer/bunk, 26 officers/car					
															Combat unit loaded add 50 percent					
															Unit loaded add 20 percent					
															Stowage add 15 percent					
															Headquarters and headquar- ters squadron, wing air force.		Berth	Set.		
															Headquarters and headquar- ters squadron, group (air force combat command or air force).		50.63	40.5	38.82	
															77.63	81.0	101.25	2	6.18/	36
															77.63	81.0	101.25	2	6.18/	36
															38.82	40.5	50.63	1	3.9/	200
															38.82	40.5	50.63	1	3.9/	200
															Squadron.....					

**REFERENCE DATA, ADMINISTRATION**

Aviation medical supply platoon.....	90.56	94.6	118.13	2	7	21	1	40	1	2	2.94	2.94	8
Group headquarters and headquarters squadron plus 1 squadron <sup>1</sup> .....	116.44	121.6	151.88	4	8	.135	1½	40	1	2	3.78	3.78	8

NOTES

- <sup>1</sup> All unit cargo vehicles loaded with organization equipment. Gasoline, oil, and water servicing vehicles empty.
- <sup>2</sup> Normal movement—Ground echelon precedes air echelon to destination.
- <sup>3</sup> Unit vehicles loaded to authorized capacity.
- <sup>4</sup> Show total requirements in each column. Only one size truck will normally be required.
- <sup>5</sup> Inflammables—Include as deck cargo.
- <sup>6</sup> Ambulance field, cross country.
- <sup>7</sup> 1 Motorecycle with side car. 1 Truck, ½-ton pick-up. 2 Trailers, 1½-ton cargo.
- <sup>8</sup> Smallest unit which may be sent with an expeditionary force.

ARMY AIR FORCE REFERENCE DATA

ROAD-RAIL-WATER MOVEMENT

Unit vehicles empty

*Normal movement<sup>1</sup>*

GROUND UNITS OR GROUND ECHELON OF AIR UNITS

Unit	Officers and warrant officers	Enlisted men	Total	Ship tons, 3.75 per man	Number	Weight empty, long tons, 2,240 pounds	Ship tons, 40 cubic feet, 40 feet	Equipment excluding vehicles	Total ship tons, 5,8, and 10 columns	Storage add 15 per- cent	Unit loaded add 20 percent	Combat unit loaded add 50 percent	Ship cargo require- ments—ship tons
1	2	3	4	5	6	7	8	9	10	11	12	13	14

Wing headquarters and headquarters squadron...  
Group headquarters and headquarters squadron  
(air force combat command or air force).....

**REFERENCE DATA, ADMINISTRATION**

Squadron	1	8	9	33.75	4.2	4.06	32	.204	.504	66.25	38.82	40.5	50.63
Aviation medical supply platoon	2	19	21	78.75	5.4	7.12	59.6	1.465	3.95	142.3	90.56	94.5	118.13
Group headquarters and headquarters squadron													
plus 1 squadron <sup>3</sup>	3	24	27	101.25	4.4	8.12	64	.731	1.894	167.14	116.44	121.5	151.88

# ARMY AIR FORCE FIELD MANUAL

## **GROUND UNITS OR GROUND ECHELON OF AIR UNITS**

NOTES

<sup>1</sup> Normal movement—Ground echelon precedes air echelon to destination.

<sup>2</sup> Inflammables—Include as deck cargo.

<sup>3</sup> Smallest unit which may be sent with an expeditionary force.

<sup>4</sup> Ambulance, field, cross country.

<sup>5</sup> 1 motorcycle; 1 ½-ton truck; 2 ½-ton trucks.

ARMY AIR FORCE REFERENCE DATA  
ROAD-RAIL-WATER MOVEMENT

Unit vehicles loaded<sup>1</sup>

*Normal movement:*

GROUND UNITS OR GROUND ECHELON OF AIR UNITS

Unit	Officers and warrant officers	Enlisted men	Totals	Ship tons, 3.7th per man	Number	Weight, 1. Loosed, 2,240 pounds	Ship tons, 40 cubic feet	Ship tons, 2,240 pounds	Ship tons, 40 cubic feet, 10 cubic yards	Equipment not carried in unit vehicles	Organization equipment	Personnel	Road movement											
													2	3	4	5	6	7	8	9	10	11	12	13
LETTERED COMPANY, REGIMENT (AVN.)																								
Headquarters and headquarters company, regiment (avn.)	4	176	180	675	25	100	604	10	39	1,318	0	0	0											
Battalion, regiment (avn.)	6	106	112	420	36	304	1,374	72	474	2,268	7	8	2											
H. and S. company, regiment (avn.) <sup>4</sup>	18	634	652	2,445	111	607	3,186	102	591	6,222	7	8	2											
Regiment (avn.) <sup>4</sup>	25	305	330	1,237.5	74	457	1,987	70	495	3,719.5	0	1	3											
	79	2,207	2,286	8,572.5	407	2,300	11,545	379	227	20,344.5	11	14	8											

**REFERENCE DATA, ADMINISTRATION**

Company, separate (avn.)	5	176	181	678	75	46	323	1,362	68	465	2,495	75	9	3	1
Lettered company battalion, separate (avn.)	4	176	180	675	75	25	100	604	13	54	1,338	0	0	0	0
Headquarters and headquarters company bat- talion, separate (avn.) <sup>7</sup>	12	159	171	641	25	73	590	2,566	96	744	3,951	25	11	6	5
Battalion, separate (avn.) <sup>7</sup>	24	687	711	2,666	25	148	891	4,378	134	905	7,949	25	1	6	5

GROUND UNITS OR GROUND ECHELON OF AIR UNITS

ARMY AIR FORCE FIELD MANUAL

Unit	Ship cargo requirements— ship tons	Rail requirements										Maintenance items						
		15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Lettered company, regiment (avn.)	1,515.7	1,581.6	1,977	1	0	12	1	1	22	250	6.25	12.5	25	0.6	1			
Headquarters and headquar- ters company, regiment (avn.)	2,608.2	2,721.6	3,402	1	3	1	0	22	1	29	360	9	18	16	.4	2		
Battalion, regiment (avn.)	7,155.3	7,466.4	9,333	1	22	4	0	58	2	89	1,110	17.76	55.5	91	2	6		
H. and S. company, regiment (avn.) <sup>6</sup>	4,277.43	4,463.4	5,679.25	1	11	2	0	44	1	3	62	740	18.50	37	46	1	4	
Regiment (avn.) <sup>6</sup>	23,396.18	24,413.4	30,516.78	3	76	12	0	203	6	8	308	4,070	101.76	203.5	320	3	22	

**REFERENCE DATA, ADMINISTRATION**

Company, separate (avn.)	28	701.12	29,949	37,436.25	1	6	1	0	12	1	1	22	460	11.5	23	25	25	.6	3
Lettered company, battalion, separate (avn.)	1,532.95	1,599.6	1,999.5	1	6	.1	0	12	1	1	1	22	250	4.25	12.5	25	25	.6	1
Headquarters and headquarters company, battalion, separate (avn.) <sup>7</sup>	4,543.94	4,741.5	5,928.88	1	5	1	0	45	1	1	1	54	730	18.25	36.5	24	.6	4	
Battalion, separate (avn.) <sup>7</sup>	9,141.64	9,539.1	11,923.88	1	24	4	0	77	2	1	100	1,480	37	74	100	100	3	8	

**NOTES**

- <sup>1</sup> All unit cargo vehicles loaded with organization equipment.
- <sup>2</sup> Gasoline, oil, and water servicing vehicles empty.
- <sup>3</sup> Normal movement—Ground echelon precedes air echelon to destination.
- <sup>4</sup> Unit vehicles loaded to authorized capacity.
- <sup>5</sup> Show total requirements in each column. Only one size truck will normally be required.
- <sup>6</sup> Inflammables—Include as deck cargo.
- <sup>7</sup> Includes band, medical detachment and warrant officers and 1 chaplain.
- <sup>8</sup> Includes medical detachment.

ARMY AIR FORCE REFERENCE DATA

ROAD-RAIL-WATER MOVEMENT

Unit vehicles empty

*Normal movement:*

GROUND UNITS OR GROUND ECHELON OF AIR UNITS

Unit	Officers and warrant officers	Draftees and men	Total	Ship tons, 3.76 per man	Weight empty, long tons, 2,240 pounds	Ship, tons, 40 cubic feet	Weight long tons, 2,240 pounds	Ship tons, 40 cubic feet	Equipment excluding vehicles	Organization equipment	Total ship tons, 2,240 and 10 cubic feet, each unit 6,880 pounds							Ship cargo requirements—ship tons	Combat unit loaded, add 50 percent
											1	2	3	4	5	6	7	8	
Lettered company, regiment (avn.)	4	176	180	675	25	72	604	18	53	1,332	1,531.8	1,593.4	1,908						
Headquarters and headquarters company, regiment (avn.)	6	106	112	420	36	243	1,374	76	500	2,294	2,638.1	2,752.8	3,441						
Battalion, regiment (avn.)	18	634	652	2,445	111	459	3,186	130	659	6,290	7,233.5	7,548	9,435						
H. & S. company, regiment (avn.) <sup>1</sup>	25	305	330	1,237.5	74	368	1,987	74	603	3,727.5	4,286.63	4,473	5,591.26						
Regiment (avn.) <sup>2</sup>	79	2,207	2,286	8,572.5	407	1,745	11,545	464	2,480	22,597.5	25,987.13	27,117	33,806.26						

## REFERENCE DATA, ADMINISTRATION

Company, separate (avn.)	5	176	181	678.75	46	267	1,352	77	481	2,511.75	2,888.51	3,017.1	3,767.63
Lettered company, battalion, separate (avn.)	4	176	180	675	25	72	604	20	68	1,348	1,550.2	1,617.6	2,022
Headquarters and headquarters battalion, separate (avn.) <sup>4</sup>	12	159	171	641.25	73	412	2,566	100	758	3,965.25	4,560	4,758.3	5,947.88
Battalion, separate (avn.)	24	687	711.2	666.25	148	628	4,378	160	985	8,009.25	9,210.84	9,611.1	12,013.88

## GROUND UNITS OR GROUND ECHELON OF AIR UNITS

## ARMY AIR FORCE FIELD MANUAL

Unit	Rail requirements										Maintenance items					
	15	16	17	18	19	20	21	22	23	24	25	26	27	28		
<b>Cars—A.R. 30-935</b>																
Lettered company, regiment (avn.)	1	6	1	0	12	1	1	22	230	6.25	12.5	25	0.63	1		
Headquarters and headquarters company, regiment (avn.)	1	3	1	0	22	1	1	29	360	9	18	16	.4	2		
Battalion, regiment (avn.)	1	22	4	0	68	2	2	89	1,110	27.75	55.5	91	2	6		
H. & S. company, regiment (avn.) <sup>3</sup>	1	11	2	0	44	1	3	62	740	18.5	37	46	1	4		
Regiment (avn.) <sup>3</sup>	3	76	12	0	203	6	8	308	4,070	101.75	203.5	320	8	22		
Company, separate (avn.)	1	6	1	0	12	1	1	22	460	11.5	23	25	.6	3		
Lettered company, battalion, separate (avn.)	1	6	1	0	12	1	1	22	250	6.25	12.5	25	.6	1		
Headquarters and headquarters battalion, separate (avn.) <sup>4</sup>	1	5	1	0	45	1	1	54	730	18.25	36.5	24	.6	4		
Battalion, separate (avn.)	1	24	4	0	77	2	1	109	1,480	37	74	100	3	8		

## NOTES

<sup>1</sup> Normal movement—Ground echelon precedes air echelon to destination.

<sup>2</sup> Includes band, medical detachment, 1 warrant officer and 1 chaplain.  
<sup>3</sup> Inflammables—Include as deck cargo.

<sup>4</sup> Includes medical detachment.